Example EQ

PART A – IMPACTS ASSESSMENT

Project Description (include brief descriptions for the following):

Project Name:	DNT 4th Lane Expansion and DNT/PGBT Interchange Improvements	Project Limits:	DNT: PGBT to SRT
Project Length:	5.5 miles	Type of Work:	Construct additional travel lane and reconfigure ramps at PGBT interchange.
County(ies):	Collin	Estimated Let Date:	2015
Estimated Cost:	$186 million (Level E)	Funding Sources:	NTTA
Existing Facility:	Six Lanes (3 in each direction)	Proposed Facility:	Eight lanes (4 in each direction)
Land Use:	Urban	Need and Purpose:	Alleviate peak period congestion along DNT and at the DNT/PGBT interchange.
Traffic Volumes:	142,440 vpd (2012); 173,800 vpd (2016); 223,600 vpd (2035). CDM Smith (Dec. 2012).	Alternatives Analysis:	Build and No Build along existing alignment.
ROW/Easements and Utilities:	Proposed ROW/easements and utility relocations needed.	Construction Phasing:	Yes

Required Exhibits: Project Location Map, USGS Topo Map, Project Photos, Typical Sections, and Constraints Map. The Constraints Map shall consist of an aerial base map depicting existing and proposed ROW/easement boundaries, relevant layers of the proposed schematic or preliminary design, and any known environmental constraints (not to exceed 11x17 sheets).

EE/NEPA Document Determining Factors

Will the proposed project involve any/or all of the following?	YES	NO
▪ analysis of build alternatives on new location	☐	☒
▪ major amounts of ROW acquisition and displacements	☐	☒
▪ complex coordination with multiple resource/regulatory agencies	☐	☒
▪ strong potential for controversy due to environmental impacts	☐	☒
If YES is checked for any of the above, an EE must be prepared.		
If the EQ concludes YES to any of the following, an EE and/or NEPA document must be prepared.		
▪ Is a §404/§10 USACE permit with notification required?	☐	☒
▪ Is a §9 USCG bridge permit required?	☐	☒
▪ Is a §10(a) ESA permit required?	☐	☒
▪ Are any other federal permits required?	☐	☒
▪ Will there be any "take" to a property listed under Chapter 26 of the Parks and Wildlife Code?	☐	☒
Does the project connect to a state or interstate highway system facility?	☐	☒
If YES, consult with NTTA PDD Environmental Manager to determine the appropriate environmental documentation requirements.		

Waters of the U.S., Including Wetlands

Does the project area contain wetland/water features?

☐ NO Provide supporting information. [1]

☒ YES Conduct wetland delineation.

Are any waters of the U.S., including wetlands, preliminarily determined to be jurisdictional within the project area?

☐ NO Prepare Technical Memorandum.

☒ YES Prepare PJD Report.

Will the project cause impacts to jurisdictional wetlands or impact more than 0.1 acre of waters of the U.S.?

☒ NO Provide supporting information. [2]

☐ YES Consult with NTTA PDD Environmental Staff if a §404/§10 USACE permit with notification is required. Consult with DSE to include any impacts in PS&E and EPIC. If an NWP PCN or an IP is required, an EE or NEPA document must be prepared.

Attachments:

☒ Supporting Information

☐ Technical Memorandum

☒ PJD Report

EQ Supporting Information:

[1] Maps of project area with outline of ROW footprint using recent aerial photography as base with overlays of NWI and NRCS soil survey data. Project site photos. Brief summary documenting conclusion.

[2] Summary table showing proposed impact calculations for each jurisdictional water/wetland. GIS shape files, calculation worksheets, and impact assessment drawings indicating avoidance of wetlands and minimal impacts to waters.

Navigable Waterways

Are there any waterway crossings within the project area?

☐ NO No documentation required.

☒ YES Are the waterways considered to be navigable according to USCG regulations?

- ☒ NO Provide supporting information. [1]
- ☐ YES Consult with NTTA PDD Environmental Staff to determine if coordination with the USCG is necessary. If a §9 permit is required, an EE or NEPA document must be prepared.

Does the proposed design include modifications to an existing bridge or the construction of a new bridge over a navigable waterway where there is potential for nighttime navigation?

☒ NO No documentation required.

☐ YES Prepare lighting exemption request letter for NTTA submittal to the USCG, and provide supporting information. [2]

Does the project cross the Trinity River from Riverside Drive in Fort Worth, Texas to a point where Houston, Madison, and Walker Counties intersect (USACE's §10 jurisdiction)?

☒ NO No documentation required.

☐ YES Provide supporting information and consult with NTTA PDD Environmental Staff to determine if coordination with the USACE is necessary. [3] If a §10 permit is required, an EE or NEPA document must be prepared.

Attachments:

☒ Supporting Information

☐ Lighting Exemption Request

EQ Supporting Information:

[1] Brief summary documenting reasons waterways are not considered navigable, including project photos of waterway crossings.

[2] USCG coordination regarding lighting exemption.

[3] Map showing §10 Trinity River jurisdictional area in relation to project area.

Water Quality (Storm Water and Impaired Waters)

How many acres of earth disturbance will occur?

☐ < 1 acre (CGP is not required.)
☐ ≥ 1 and < 5 acres (SW3P and Small CSN required in accordance with CGP.)
☒ ≥ 5 acres (SW3P, NOI, and Large CSN required in accordance with CGP.)

Supporting information is required for all amounts of earth disturbance. [1]

Is the project within 5 stream miles upstream of a segment which is listed as threatened or impaired on the most recent EPA-approved §303(d) list?

☒ NO Provide supporting information. [2]
☐ YES Will runoff from this project discharge directly into or within 5 miles upstream of the threatened or impaired stream segment?
  ☐ NO Provide supporting information. [3]
  ☐ YES Determine the appropriate BMPs that would be used to minimize water quality impacts in coordination with the DSE.

Attachments:
☒ Supporting Information

EQ Supporting Information:
[1] Map showing acreage of earth disturbance.
[2] Appropriate pages of §303(d) list.
[3] Standard project email from DSE verifying there will not be discharge.

Floodplains

Is the proposed project within the FEMA designated 100-yr floodplain?

☒ NO Provide supporting information. [1]
☐ YES Will the proposed design modify the BFE based on coordination with DSE?
  ☐ NO Submit supporting information from DSE coordination. [2]
  ☐ YES Submit supporting information and consult DSE. [3] Coordination with local floodplain administrator is required.

Is the project within the Trinity River CDC Regulatory Zone?

☒ NO Provide supporting information. [4]
☐ YES Consult with PDD Environmental Staff and determine if an exemption or a CDC will be required. Provide CDC exemption or CDC coordination documentation.

Attachments:
☒ Supporting Information
☐ CDC Exemption
☐ CDC

EQ Supporting Information:
[1] Copy of FEMA FIRM panel with overlay of project limits.
[2] Standard project email from DSE verifying there will not be modifications to the BFE.
[3] Standard project email from DSE verifying that modifications to the BFE are proposed.
[4] Map identifying the Trinity River CDC Regulatory Zone and proposed project limits.

Vegetation and Wildlife

Will the project impact any unusual vegetative features (i.e. fencerow vegetation, riparian vegetation, large or specimen trees, and/or unusual or isolated stands of vegetation) or wildlife special habitat features (i.e. bottomland hardwoods, caves, cliffs, bluffs, native prairies, seeps/springs, snags, water bodies, and/or bridges supporting bird/bat colonies)?

☒ NO Provide supporting information. [1]
☐ YES Prepare Technical Memorandum, including estimated existing and potentially impacted habitat acreage calculations, and consult with PDD Environmental Staff to determine appropriate coordination with the TPWD and mitigation.

Does the project have the potential to directly or indirectly affect migratory birds, or their nests or eggs (such as vegetation removal, box culvert replacement/repair, bridge work, etc.)?

☐ NO Provide supporting information. [1]
☒ YES Consult with the PDD ECM to determine appropriate actions prior to construction and provide documentation of MBTA coordination.

Attachments:
☒ Supporting Information
☐ Technical Memorandum
☒ MBTA Coordination

EQ Supporting Information:
[1] Brief summary documenting conclusions including project photos.

Threatened and Endangered Species

Will the project result in harm to or the taking of a federally-listed threatened or endangered animal species, as per §10(a) of the ESA?

☒ NO Provide supporting information. [1]

☐ YES An EE or NEPA document must be prepared. Coordinate next steps with NTTA PDD Environmental Staff.

Are any federal permits required for the project due to impacts to other resources?

☐ NO No documentation required.

☒ YES Consult with NTTA PDD Environmental Staff. An EE or NEPA document may be required as well as compliance with §7 of the ESA.

Attachments:

☒ Supporting Information

EQ Supporting Information:

[1] Brief summary documenting conclusions from field visit and background research including USFWS local threatened and endangered species listing, TPWD county lists, and TPWD NDD search results.

Historic-age Resources

Does the project affect or have the potential to affect any historic-age resources?

☒ NO Provide supporting information. [1] Coordination with THC is not required.

☐ YES Provide supporting information. [2] Prepare Historic-age Resources Due Diligence Report (DDR) for NTTA file. Coordination with THC is not required.

Does the project affect or have the potential to affect any previously recorded historic sites (i.e., NRHP or RTHL)?

☒ NO Provide supporting information. [1] Coordination with THC is not required.

☐ YES Prepare THC Coordination Letter to determine if further investigations are necessary. Prepare Historic-age Resources DDR, if necessary.

Does the THC recommend an Intensive Survey upon concurrence with the Historic-age Resources DDR?

☒ NO No further investigations required.

☐ YES Consult with NTTA PDD Environmental Staff to determine the next steps. Prepare EE if Intensive Survey is determined to be necessary.

Attachments:

☒ Supporting Information

☐ THC Coordination Letter

☐ Historic-age Resources DDR

EQ Supporting Information:

[1] Standard project email from Environmental Consultant documenting the findings of previous investigations concluding that no historic-age resources or previously recorded historic sites exist within the project area.

[2] File review results and historic-age resources map.

Archeological Resources

Does the project affect or have the potential to affect any potential, known, or recorded archeological sites (i.e., NRHP, RTHL, or SAL)?

☒ NO Provide supporting information. [1] Prepare THC Coordination Letter requesting concurrence that no further investigations are required.

☐ YES Prepare THC Coordination Letter to determine if further investigations are necessary. Obtain TAP and prepare Archeological Survey Report, if necessary.

Are any adverse effects to NRHP-eligible or -listed properties identified that cannot be avoided and that require mitigation?

☒ NO No further investigations required.

☐ YES Consult with NTTA PDD Environmental Staff to determine the next steps. Prepare EE if mitigation/data recovery is determined to be necessary.

Attachments:

☒ Supporting Information

☒ THC Coordination Letter

☐ Archeological Survey Report

EQ Supporting Information:

[1] Standard project email from Environmental Consultant documenting the findings of previous investigations concluding that no potential or known archeological sites exist within the project area.

Air Quality

Does the project propose added capacity with a design year AADT ≥ 140,000 vpd? ☐ NO Provide supporting information. [1] ☒ YES Conduct a TAQA and prepare a Technical Memorandum. Does the project have potential for meaningful MSAT effects? ☐ NO No MSAT analysis required. ☒ YES Conduct qualitative MSAT analysis, including sensitive receptor assessment, and provide supporting information. [2]	Attachments: ☒ Supporting Information ☒ Technical Memorandum EQ Supporting Information: [1] Standard project email from DSE verifying the project will not result in added capacity with a design year AADT ≥ 140,000 vpd. [2] Standard project email documenting that no sensitive receptors exist within 500 meters of the project ROW or a map and summary table indicating the locations and addresses of any sensitive receptors within 500 meters of project ROW.

Traffic Noise

Will the project be on new location, substantially alter the horizontal or vertical alignment, or include added capacity? ☐ NO Provide supporting information. [1] ☒ YES Conduct a traffic noise analysis and prepare Technical Memorandum. If the project is proposed on new location, an EE or NEPA document must be prepared that includes a summary of the traffic noise analysis.	Attachments: ☐ Supporting Information ☒ Technical Memorandum EQ Supporting Information: [1] Standard project email from DSE verifying project is not proposed on new location, does not propose added capacity, or will not substantially alter the horizontal or vertical alignment.

Hazardous Materials

Do the results of the Hazmat Initial Site Assessment indicate that any RECs exist within 1 mile of the project area? ☒ NO Provide supporting information. [1] ☐ YES Prepare Phase I ESA. Did the Phase I ESA identify an REC within or immediately adjacent to the project area? ☐ NO Submit Phase I ESA. ☐ YES Prepare Phase II ESA and coordinate with DSE to incorporate findings in the EPIC and PS&E. Does Phase II ESA recommend site remediation? ☐ NO Submit Phase II ESA. ☐ YES Prepare Technical Memorandum and coordinate with DSE to incorporate any recommended materials handling activities in PS&E.	Attachments: ☒ Supporting Information ☐ Phase I ESA ☐ Phase II ESA ☐ Technical Memorandum EQ Supporting Information: [1] Brief summary of Hazmat Initial Site Assessment including EPA/TCEQ records database search results and summary of windshield survey confirming database search results.

Socioeconomics and Environmental Justice

A baseline assessment of regional/community growth, community cohesion, LEP, displacements/relocations, minority and low-income populations, EJ, and U.S. Census Bureau data shall be conducted for all NTTA projects and documented in a Technical Memorandum.	Attachments: ☒ Technical Memorandum

Indirect and Cumulative Impacts

Indirect and cumulative impacts analyses are not required for an EQ.	Attachments: N/A

Public Lands

Do public lands designated as parklands, recreational areas, scientific areas, wildlife refuges, or historic sites exist within or adjacent to the proposed ROW? ☒ NO No documentation required. ☐ YES Will the project require the taking or use of the designated public lands? ☐ NO Provide supporting information. [1] ☐ YES The project must comply with Chapter 26 of the Texas Statutes of the Parks and Wildlife Code. Consult with NTTA PDD Environmental Staff. An EE must be prepared and a Public Hearing must be conducted in addition to other documentation/coordination requirements.	Attachments: ☐ Supporting Information EQ Supporting Information: [1] Brief summary including description of public lands within project area, map with proposed design and public land property boundary overlaid, and a standard project email from the DSE confirming that ROW will not be needed from the public land property.

Local Tree Ordinances

Is the project located within a municipality with a local tree ordinance? ☐ NO No documentation required. ☒ YES Will trees be impacted? ☐ NO Provide supporting information. [1] ☒ YES Consult with NTTA PDD Environmental Staff to determine compliance and documentation/mitigation requirements as they vary by community and provide documentation of coordination.	Attachments: ☐ Supporting Information ☒ Ordinance Requirements Coordination EQ Supporting Information: [1] Brief summary documenting field visit and research/maps confirming that trees will not be impacted by the project.

Airway-Highway Clearance

Is the project located within 2 miles of one of the 11 airports in the North Texas region? ☐ NO No documentation required. ☒ YES Coordination with the local airport(s) is required to ensure that design criteria are met for adequate airway-highway clearance.	Attachments: ☒ Local Airport Coordination Letter(s)

Public Involvement

Type of Outreach:	Date:	Location:
Stakeholder Meeting	8/28/07 – present (See attached summary)	Various locations in Plano, TX.
MAPO	N/A	
Public Meeting	TBD	TBD
Public Hearing	N/A	
Other	N/A	

Project Tracking

NTTA PDD Lead Environmental Planner: Julie Morse Phone: 214-224-3037 Email: jmorse@ntta.org		EQ Prepared By (name and firm): J. Craig Hancock, P.E. (HNTB) Phone: 214-224-2434 Email: chancock@hntb.com	
Provide dates for the following:			
Item	Date	Item	Date
Field Visit	11/9/12	Final Design Verification	
First Submittal	12/20/12	PDD Comments Received	
Second Submittal		PDD Comments Received	
Third Submittal		PDD Comments Received	
Subsequent Submittals		PDD Comments Received	

Other Observations

PART B – DOCUMENTATION, COORDINATION, and APPROVALS

Required Documentation	Required Coordination	Anticipated Actions/Approvals
Waters of the U.S., Including Wetlands		
☐ Supporting Information[1]	☐ PDD Environmental Staff	☐ Approval
☒ Supporting Information[2]	☒ PDD Environmental Staff ☒ DSE	☒ Approval ☒ Include in EPIC and PS&E
☐ Technical Memorandum	☐ PDD Environmental Staff	☐ Approval
☒ PJD Report	☒ PDD Environmental Staff ☐ USACE	☒ Approval ☐ Jurisdictional Determination
Navigable Waterways		
☒ Supporting Information[1]	☒ PDD Environmental Staff	☒ Approval
☐ Lighting Exemption Request	☐ PDD Environmental Staff	☐ Approval
☐ Supporting Information[2]	☐ USCG	☐ Coordination
☐ Supporting Information[3]	☐ PDD Environmental Staff	☐ Approval
Water Quality (Storm Water and Impaired Waters)		
☒ Supporting Information[1]	☒ PDD Environmental Staff	☒ Approval
☒ Supporting Information[2]	☒ PDD Environmental Staff	☒ Approval
☐ Supporting Information[3]	☐ PDD Environmental Staff ☐ DSE	☐ Approval ☐ Confirmation
Floodplains		
☒ Supporting Information[1]	☒ PDD Environmental Staff	☒ Approval
☐ Supporting Information[2]	☐ PDD Environmental Staff ☐ DSE	☐ Approval ☐ Confirmation
☐ Supporting Information[3]	☐ PDD Environmental Staff ☐ DSE	☐ Approval ☐ Confirmation
☒ Supporting Information[4]	☒ PDD Environmental Staff	☒ Approval
☐ CDC or Exemption	☐ PDD Environmental Staff ☐ Floodplain Administrator ☐ USACE ☐ Participating Entities	☐ Approval ☐ Approval ☐ Issues CDC or Exemption ☐ Approval
Vegetation and Wildlife		
☒ Supporting Information[1]	☒ PDD Environmental Staff	☒ Approval
☐ Technical Memorandum	☐ PDD Environmental Staff ☐ TPWD	☐ Approval ☐ Coordination
☒ MBTA Coordination	☒ PDD ECM	☒ Contractor Coordination
Threatened and Endangered Species		
☒ Supporting Information[1]	☒ PDD Environmental Staff ☒ TPWD	☒ Approval ☒ Obtain NDD Results
Historic-age Resources		
☒ Supporting Information[1]	☒ Environmental Consultant ☒ PDD Environmental Staff	☒ Confirmation ☒ Approval
☐ Supporting Information[2]	☐ PDD Environmental Staff	☐ Approval
☐ THC Coordination Letter	☐ PDD Environmental Staff ☐ THC	☐ Approval ☐ Coordination
☐ Historic-age Resources DDR	☐ PDD Environmental Staff ☐ THC	☐ Approval ☐ Approval

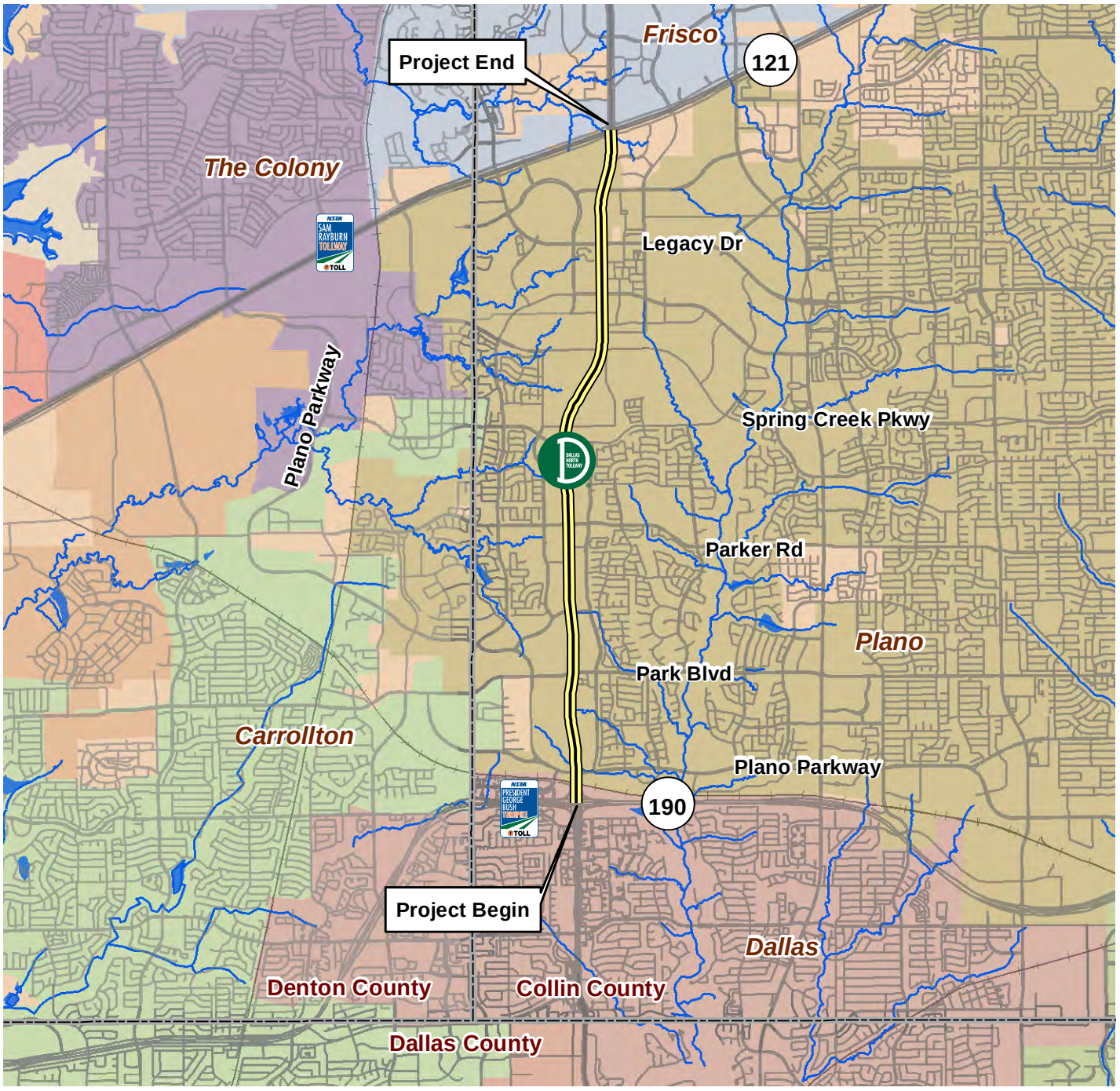
Required Documentation	Required Coordination	Anticipated Actions/Approvals
Archeological Resources		
☒ Supporting Information[1]	☒ Environmental Consultant ☒ PDD Environmental Staff	☒ Confirmation ☒ Approval
☒ THC Coordination Letter	☒ PDD Environmental Staff ☒ THC	☒ Approval ☒ Coordination
☐ Archeological Survey Report	☐ PDD Environmental Staff ☐ THC	☐ Approval ☐ Approval
Air Quality		
☐ Supporting Information[1]	☐ PDD Environmental Staff ☐ DSE	☐ Approval ☐ Confirmation
☒ Technical Memorandum	☒ PDD Environmental Staff	☒ Approval
☒ Supporting Information[2]	☒ PDD Environmental Staff	☒ Approval
Traffic Noise		
☐ Supporting Information[1]	☐ PDD Environmental Staff ☐ DSE	☐ Approval ☐ Confirmation
☒ Technical Memorandum	☒ PDD Environmental Staff	☒ Approval
Hazardous Materials		
☒ Supporting Information[1]	☒ PDD Environmental Staff	☒ Approval
☐ Phase I ESA	☐ PDD Environmental Staff	☐ Approval
☐ Phase II ESA	☐ PDD ECM ☐ DSE	☐ Approval ☐ Include in EPIC and PS&E
☐ Technical Memorandum	☐ PDD ECM ☐ DSE ☐ TCEQ	☐ Approval ☐ Include in PS&E ☐ Approval
Socioeconomics and Environmental Justice		
☒ Technical Memorandum	☒ PDD Environmental Staff	☒ Approval
Indirect and Cumulative Impacts		
N/A		
Public Lands		
☐ Supporting Information[1]	☐ PDD Environmental Staff ☐ DSE	☐ Approval ☐ Confirmation
Local Tree Ordinances		
☐ Supporting Information[1]	☐ PDD Environmental Staff	☐ Approval
☒ Ordinance Requirements Coordination	☒ PDD Environmental Staff ☐ Local Entity	☒ Approval ☐ Coordination
Airway-Highway Clearance		
☒ Local Airport Coordination Letter(s)	☒ PDD Environmental Staff ☒ Local Airport(s)	☒ Approval ☒ Coordination
Public Involvement		
☒ Stakeholder Meeting Summary	☒ PDD Environmental Staff	☒ Approval
☐ MAPO Summary	☐ PDD Environmental Staff	☐ Approval
☒ Public Meeting Summary Report	☒ PDD Environmental Staff	☒ Approval
☐ Public Hearing Summary Report	☐ PDD Environmental Staff	☐ Approval

Public Involvement Summary
DNT 4th Lane Expansion and DNT/PGBT Interchange Improvements

Date	Stakeholders	Discussions
1/26/2009	Billingsley	Review of access requests near Plano Parkway and Haverwood. The Billingsley's are interested in developing all four quadrants of the PGBT/DNT intersection and were interested in access to these quadrants.
11/3/2008	Winstead, Billingsley	Review of ramp revision schematic and proposed site development plans.
10/24/2008	City of Plano	Meeting to discuss possible ramp modifications at Legacy Drive (JC Penny request), traffic projections at Legacy during the peak hours, and the City's use of NTTA traffic cameras.
10/8/2008	City of Plano	VE Workshop preparation.
8/21/2008	Taubman Group (Willow Bend Mall)	Meeting to discuss alternative near Park Blvd. and Chapel Hill. The City reiterated their concern with the congestion at Park Blvd.
6/16/2008	City of Plano	Meeting to discuss alternative NB ramp configurations between PGBT and Park Blvd. and to get a sense of the neighboring property owners "buy-in."
5/13/2008	City of Plano	Discussions on access, especially the DNT/PGBT ramps and the access and congestion relief at Park Blvd. and the alternatives for COSTCO and Sewell properties. Ramps at Chapel Hill and possible conflicts with the "ramp off a ramp" option were discussed.
5/7/2008	Sewell Hummer	Discussions on the DNT/PGBT southbound alternatives, visibility, ROW impacts, landscaping and lighting requirements, construction staging, and the overall project timeline.
3/25/2008	COSTCO	Review of two DNT/PGBT southbound ramping alternatives and discussion of maintaining visibility and access.
2/28/2008	City of Plano	Review of DNT/PGBT concept alternatives (5) developed to date. "Out of the Box" solutions were still being sought and considered by the NTTA.
8/28/2007	City of Plano and Plano City Council	Project background was presented, discussing tolling of Plano Parkway exit/entrance ramps, widening the PGBT ramps, DNT ramp modifications, and City participation.

Exhibits

Contents



N

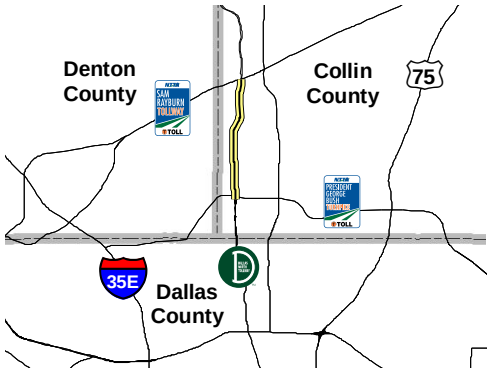
NTTA
NORTH TEXAS TOLLWAY AUTHORITY

0 0.5 1 1.5 Miles

LEGEND

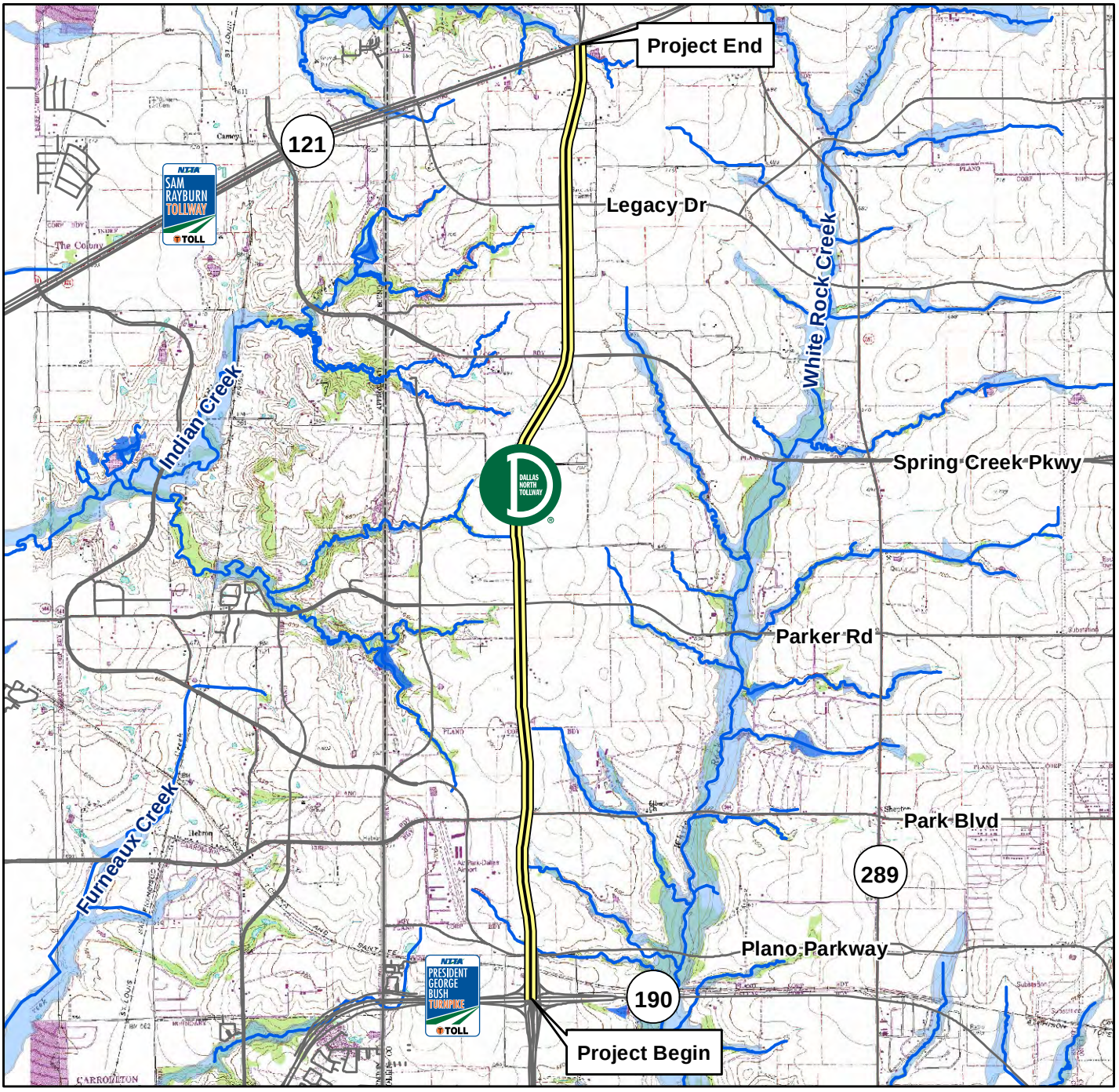
- Proposed Project Limits
- Road
- Lake/Pond
- Stream
- County Boundary

Source: NCTCOG GIS Data (2003-2006) - counties, cities, roads, streams, and lakes.



PROJECT LOCATION MAP

Dallas North Tollway (DNT)
from
President George Bush Turnpike (SH 190)
to
Sam Rayburn Tollway (SH 121)



N

NTTA
NORTH TEXAS TOLLWAY AUTHORITY

0 0.25 0.5 0.75 1 Miles

LEGEND

- Proposed Project Limits
- County Boundary
- Stream
- 100-Year Floodplain

Source: USGS Hebron, TX 7.5 Minute Quadrangle Map (USDA-NRCS, 2003) and FEMA Q3 Data (NCTCOG, 2011)

USGS TOPOGRAPHIC MAP

Dallas North Tollway (DNT)
from
President George Bush Turnpike (SH 190)
to
Sam Rayburn Tollway (SH 121)

PROJECT PHOTOGRAPHS

Photo 1. Looking south along DNT at PBGT interchange (project begin).

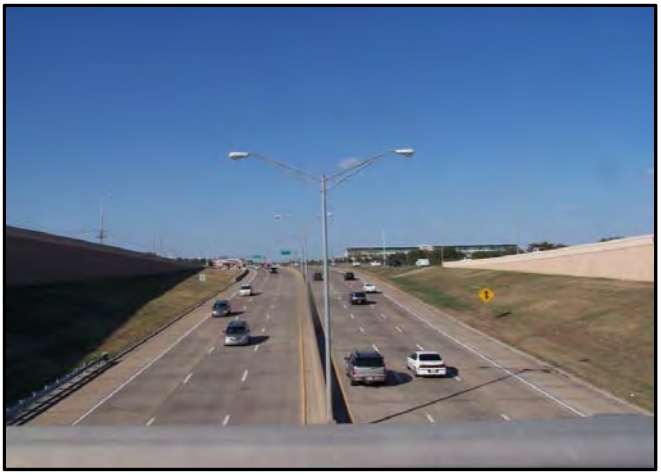


Photo 2. Looking north along DNT from Plano Pkwy.

Photo 3. Looking north along northbound frontage road of DNT, trees on the right potentially impacted by construction.

Photo 4. Looking south along northbound frontage road of DNT between Park Blvd. and Plano Pkwy.

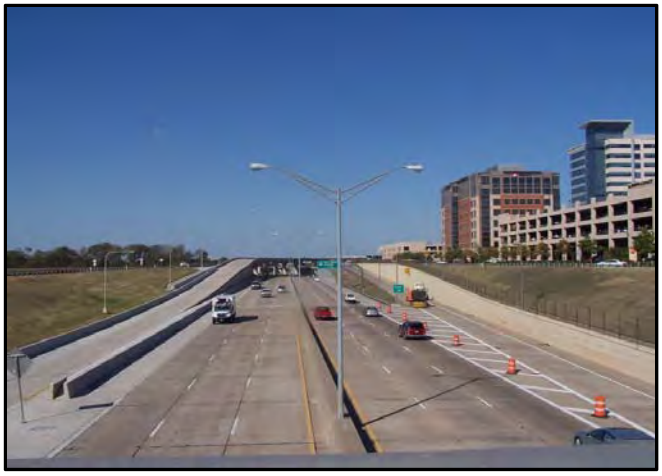


Photo 5. Looking north along DNT from Legacy Dr.

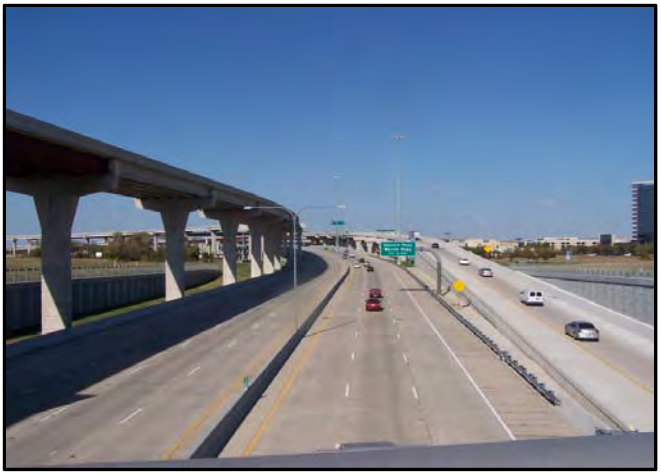
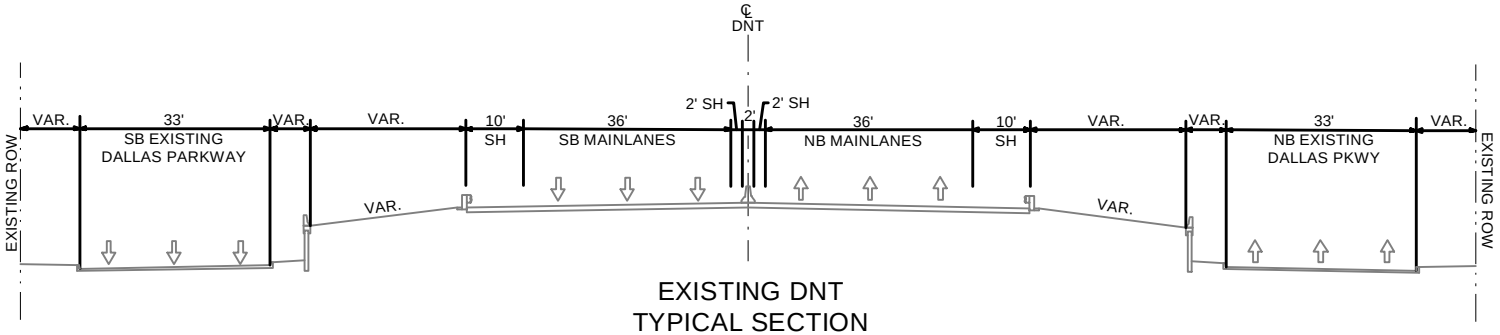
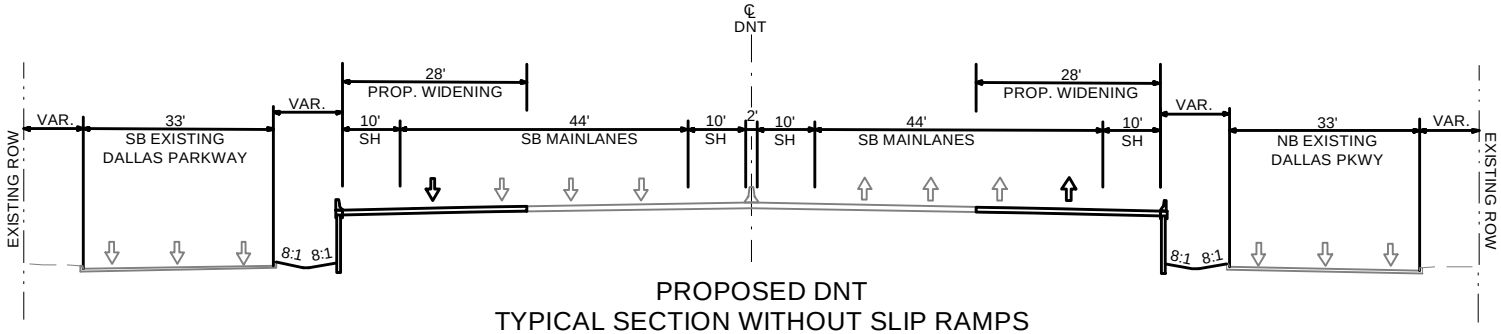


Photo 6. Looking north along DNT from Headquarters Dr. at SRT (project end).



EXISTING DNT
TYPICAL SECTION



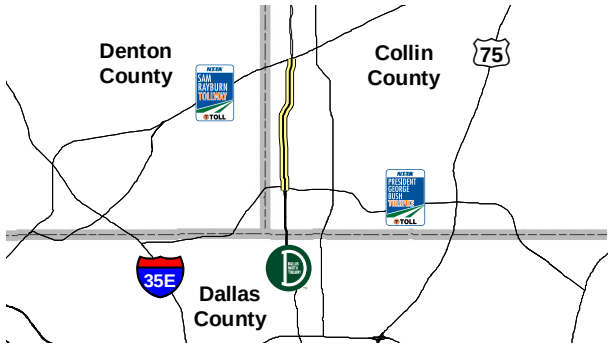
PROPOSED DNT
TYPICAL SECTION WITHOUT SLIP RAMPS
FROM PARK BLVD TO SAM RAYBURN TOLLWAY

NORTH TEXAS TOLLWAY AUTHORITY

LEGEND

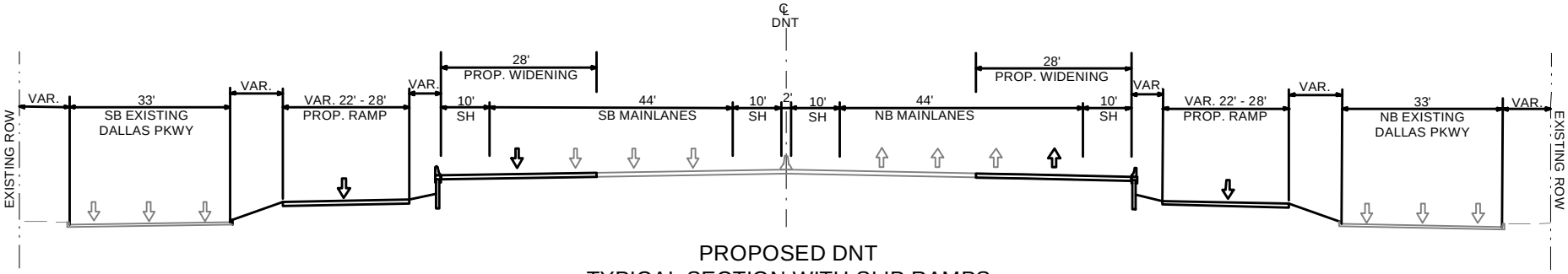
Proposed Project Limits

County Boundary

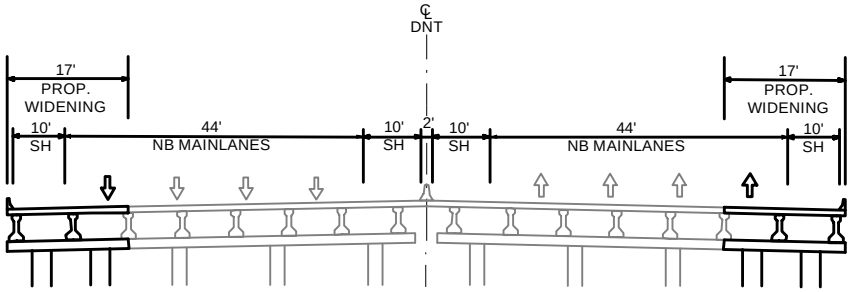


TYPICAL SECTIONS
SHEET 1 OF 2

Dallas North Tollway (DNT)
from
President George Bush
Turnpike (SH 190)
to
Sam Rayburn Tollway (SH 121)



PROPOSED DNT
TYPICAL SECTION WITH SLIP RAMPS
FROM PARK BLVD TO SAM RAYBURN TOLLWAY



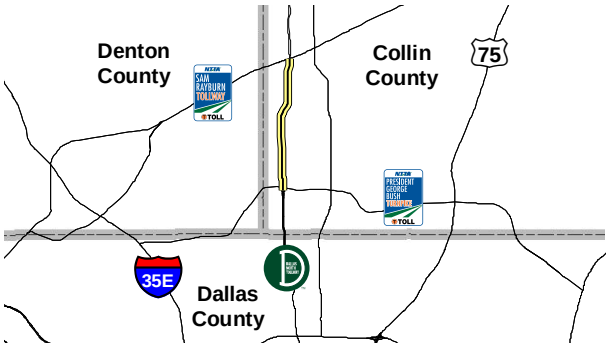
DNT TYPICAL BRIDGE SECTION WITH
PROPOSED BRIDGE WIDENING

NTTA®
NORTH TEXAS TOLLWAY AUTHORITY

LEGEND

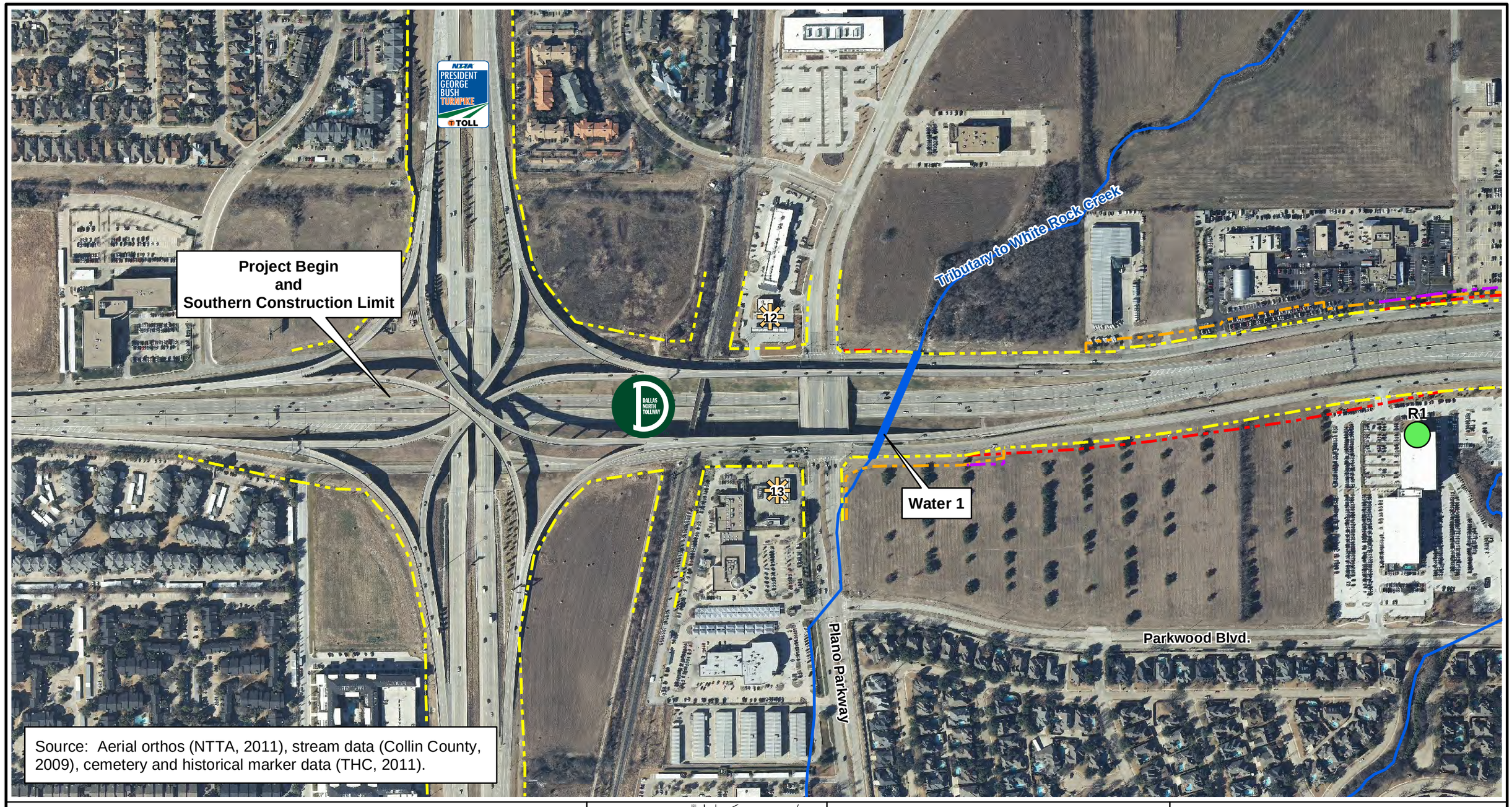
Proposed Project Limits

County Boundary



TYPICAL SECTIONS
SHEET 2 OF 2

Dallas North Tollway (DNT)
from
President George Bush
Turnpike (SH 190)
to
Sam Rayburn Tollway (SH 121)



Source: Aerial orthos (NTTA, 2011), stream data (Collin County, 2009), cemetery and historical marker data (THC, 2011).

Legend

- Existing ROW
- Proposed ROW
- Existing Easement
- Proposed Easement
- Stream
- Hazmat Site
- Non-Impacted Noise Receiver
- Impacted Noise Receiver
- Historical Marker

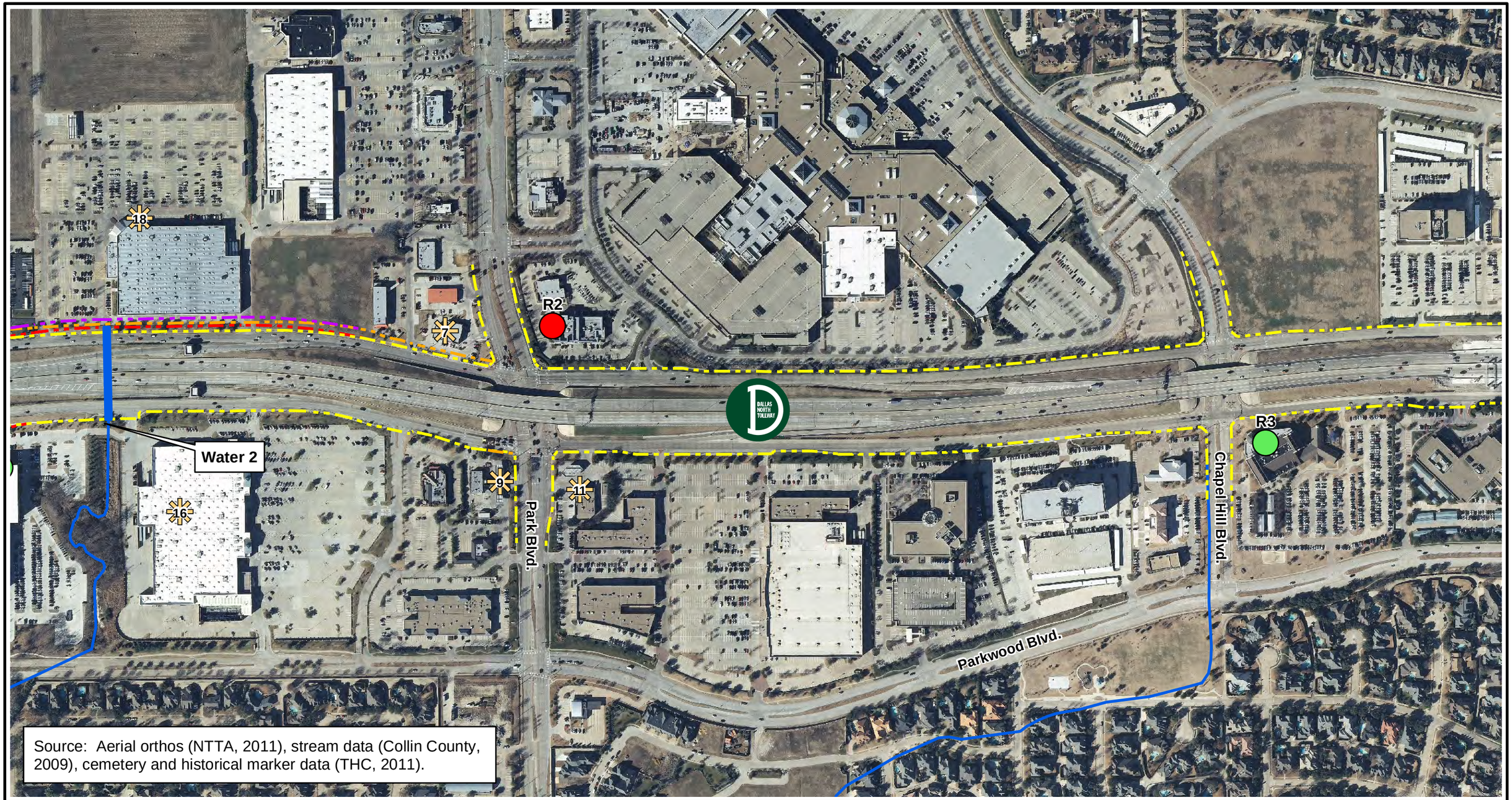
NTTA
NORTH TEXAS TOLLWAY AUTHORITY

N

0 1,000 2,000 Feet

CONTRAINTS MAP
SHEET 1 OF 6

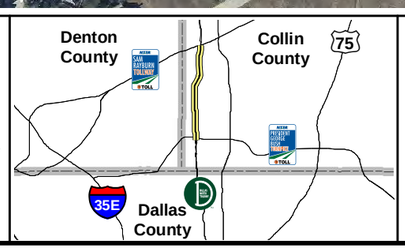
Dallas North Tollway (DNT)
from
President George Bush Turnpike (SH 190)
to
Sam Rayburn Tollway (SH 121)



Legend

- Existing ROW
- Proposed ROW
- Existing Easement
- Proposed Easement
- Stream
- Hazmat Site
- Non-Impacted Noise Receiver
- Impacted Noise Receiver
- Historical Marker

NTTA
NORTH TEXAS TOLLWAY AUTHORITY

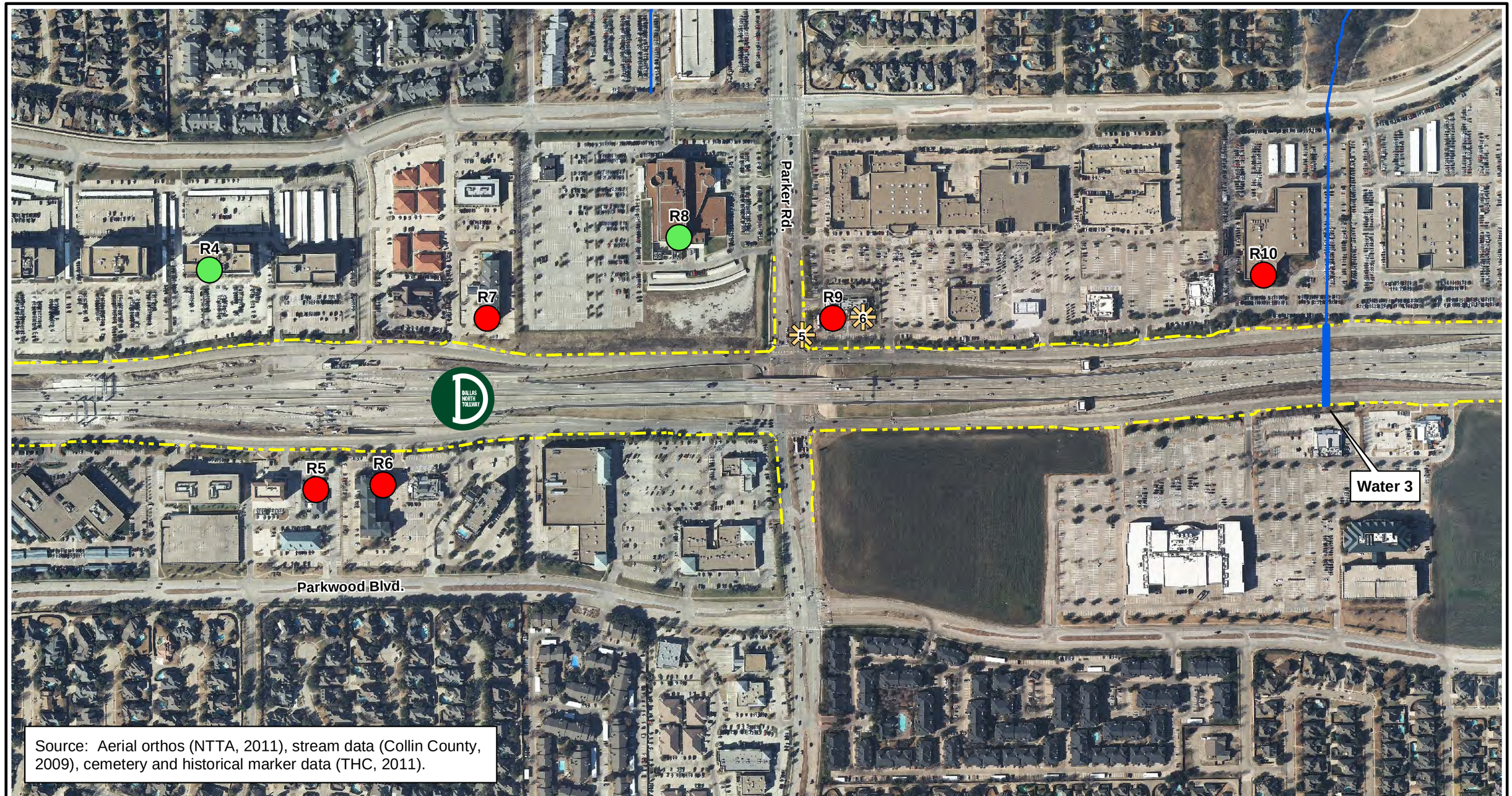


N

0 1,000 2,000 Feet

CONTRAINTS MAP
SHEET 2 OF 6

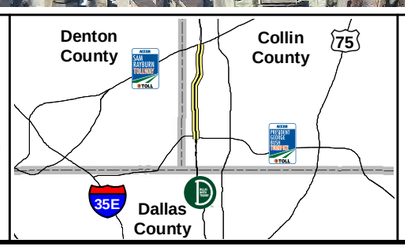
Dallas North Tollway (DNT)
from
President George Bush Turnpike (SH 190)
to
Sam Rayburn Tollway (SH 121)



Legend

- Existing ROW
- Proposed ROW
- Existing Easement
- Proposed Easement
- Stream
- Hazmat Site
- Non-Impacted Noise Receiver
- Impacted Noise Receiver
- Historical Marker

NTTA
NORTH TEXAS TOLLWAY AUTHORITY



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0 1,000 2,000 Feet

CONTRAINTS MAP
SHEET 3 OF 6

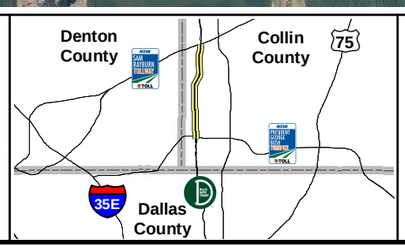
Dallas North Tollway (DNT)
from
President George Bush Turnpike (SH 190)
to
Sam Rayburn Tollway (SH 121)

Source: Aerial orthos (NTTA, 2011), stream data (Collin County, 2009), cemetery and historical marker data (THC, 2011).

Legend

- Existing ROW
- Proposed ROW
- Existing Easement
- Proposed Easement
- Stream
- Hazmat Site
- Non-Impacted Noise Receiver
- Impacted Noise Receiver
- Historical Marker

NTTA
NORTH TEXAS TOLLWAY AUTHORITY



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0 1,000 2,000 Feet

CONTRAINTS MAP
SHEET 4 OF 6

Dallas North Tollway (DNT)
from
President George Bush Turnpike (SH 190)
to
Sam Rayburn Tollway (SH 121)

Communications Pkwy.

Legacy Dr.

DALLAS NORTH TOLLWAY

R12

R13

R14

Democracy Dr.

Tennyson Pkwy.

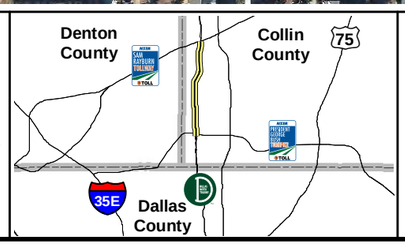
Baccus Cemetery

Source: Aerial orthos (NTTA, 2011), stream data (Collin County, 2009), cemetery and historical marker data (THC, 2011).

Legend

- Existing ROW
- Proposed ROW
- Existing Easement
- Proposed Easement
- Stream
- Hazmat Site
- Non-Impacted Noise Receiver
- Impacted Noise Receiver
- Historical Marker

NTTA
NORTH TEXAS TOLLWAY AUTHORITY



N

0 1,000 2,000 Feet

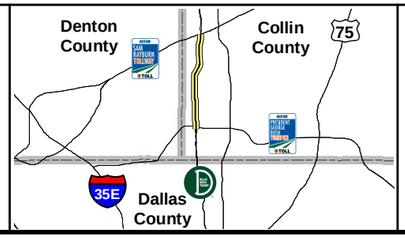
CONTRAINTS MAP
SHEET 5 OF 6

Dallas North Tollway (DNT)
from
President George Bush Turnpike (SH 190)
to
Sam Rayburn Tollway (SH 121)

Legend

- Existing ROW
- Proposed ROW
- Existing Easement
- Proposed Easement
- Stream
- Hazmat Site
- Non-Impacted Noise Receiver
- Impacted Noise Receiver
- Historical Marker

NTTA
NORTH TEXAS TOLLWAY AUTHORITY



N

0 1,000 2,000 Feet

CONTRAINTS MAP
SHEET 6 OF 6

Dallas North Tollway (DNT)
from
President George Bush Turnpike (SH 190)
to
Sam Rayburn Tollway (SH 121)

Coordination Letters

Contents

NORTH TEXAS TOLLWAY AUTHORITY

5900 West Plano Parkway, Suite 100 ● Plano, Texas 75026 ● (214) 461-2000 ● Fax (214) 528-4826 ● www.ntta.org

December 18, 2012

Mark Denton
Department of Antiquities Protection
Texas Historical Commission
P.O. Box 12276
Austin, Texas 78711-2276

Texas Antiquities Code Coordination
DNT 4th Lane Expansion and DNT/PGBT Interchange Improvements
Collin County, Texas

Dear Mr. Denton:

In accordance with Chapter 26 of the Antiquities Code of Texas and the North Texas Tollway Authority (NTTA) policy regarding cultural resources, we hereby initiate coordination for the subject project. The NTTA is currently in the planning process to expand the Dallas North Tollway (DNT) from President George Bush Turnpike (PGBT) to Sam Rayburn Tollway (SRT) in Collin County, Texas. The NTTA plans to expand the DNT by adding one toll lane in each direction and improve the traffic flow at the DNT/PGBT interchange by making ramping modifications. The proposed improvements would be financed by the NTTA without federal financial assistance and would be constructed primarily within existing ROW owned and maintained by the NTTA. In the event that a federal permit is required for impacts resulting from the proposed project, the NTTA would initiate consultation with the lead federal agency in compliance with Section 106 of the National Historic Preservation Act.

The archeological Area of Potential Effects (APE) for the proposed project encompasses approximately 204 acres and typically ranges from 300 to 400 feet wide and is approximately 5.5 miles long. The project is primarily proposed within existing right-of-way (ROW), with the exception of a portion of the PGBT interchange improvements which would require 1.47 acres of ROW acquisition and 0.49 acre of extended utility easements between Plano Parkway and Park Boulevard. The total area to be impacted by construction activities is 62.17 acres. The majority of vertical impacts would extend to a maximum depth of 5 feet below ground surface for the planned construction; however, vertical impacts would extend to a maximum depth of 27 feet below ground surface for the construction of a portion of one ramp between PGBT and Plano Parkway. See attached exhibits for additional project details.

The proposed project site lies in an urbanized, upland area within the Blackland Prairie Ecological Region of Texas. Geology in the project area is mapped as Austin Chalk and dates to the Cretaceous Period. The area has been disturbed by highway, road, and drainage construction. According to the *Soil Survey of Collin County, Texas,* the project site is primarily located within the Houston Black Series, which consists of deep, gently sloping calcareous, clayey soils in uplands.

An archeological background literature and records search was performed to determine the locations of any previous surveys and recorded sites in or near the project area and to determine the need for additional archeological investigation. The background research included examination of records at the Texas Archeological Research Laboratory (TARL) and the Texas Historical Commission (THC), via the online Texas Historic Sites Atlas (Atlas). Site files, relevant maps, and the National Register of Historic Places (NRHP) listings were examined. Aerial photographs and soil survey maps were also examined.

To date, one archeological survey has been conducted within the project APE. According to the Atlas, the survey was conducted by Ecological Communications Corporation in 2008 for a Texas Department of Transportation project along Windhaven Parkway. The survey identified no archeological resources. No archeological properties which would be eligible for listing in the NRHP or warrant designation as a State Archeological Landmark (SAL) have been identified within the APE, and no archeological sites are located within 1 kilometer (km) of the APE. In addition, there are no standing structures within the APE.

Based on the project's upland location within a geologic setting with minimal potential to contain buried archeological deposits, a lack of known archeological sites within or adjacent to the APE, and the disturbances both within and adjacent to the APE from previous roadway construction, there is little likelihood of significant or intact prehistoric or historical archeological sites within the APE nor is the geologic setting favorable for their occurrence or preservation. No archeological historic properties (36 CFR 800.16[l]) or SALs (13 TAC 26.12) occur within the APE and none would be affected by the proposed undertaking. As a result of the negative findings of the background research, it is recommended that no additional archeological investigations are warranted. If cultural resources are identified during construction activities, the NTTA will cease construction at the point of discovery and will not proceed with the undertaking at that location until additional review and clearance by the THC has been completed.

We request your concurrence that the proposed project is not likely to impact archeological resources and would require no further archeological investigations. If further information is required, please contact Julie Morse at jmorse@ntta.org or 214-224-3037.

Sincerely,

Lori Shelton, AICP
Project Manager

LS/jm

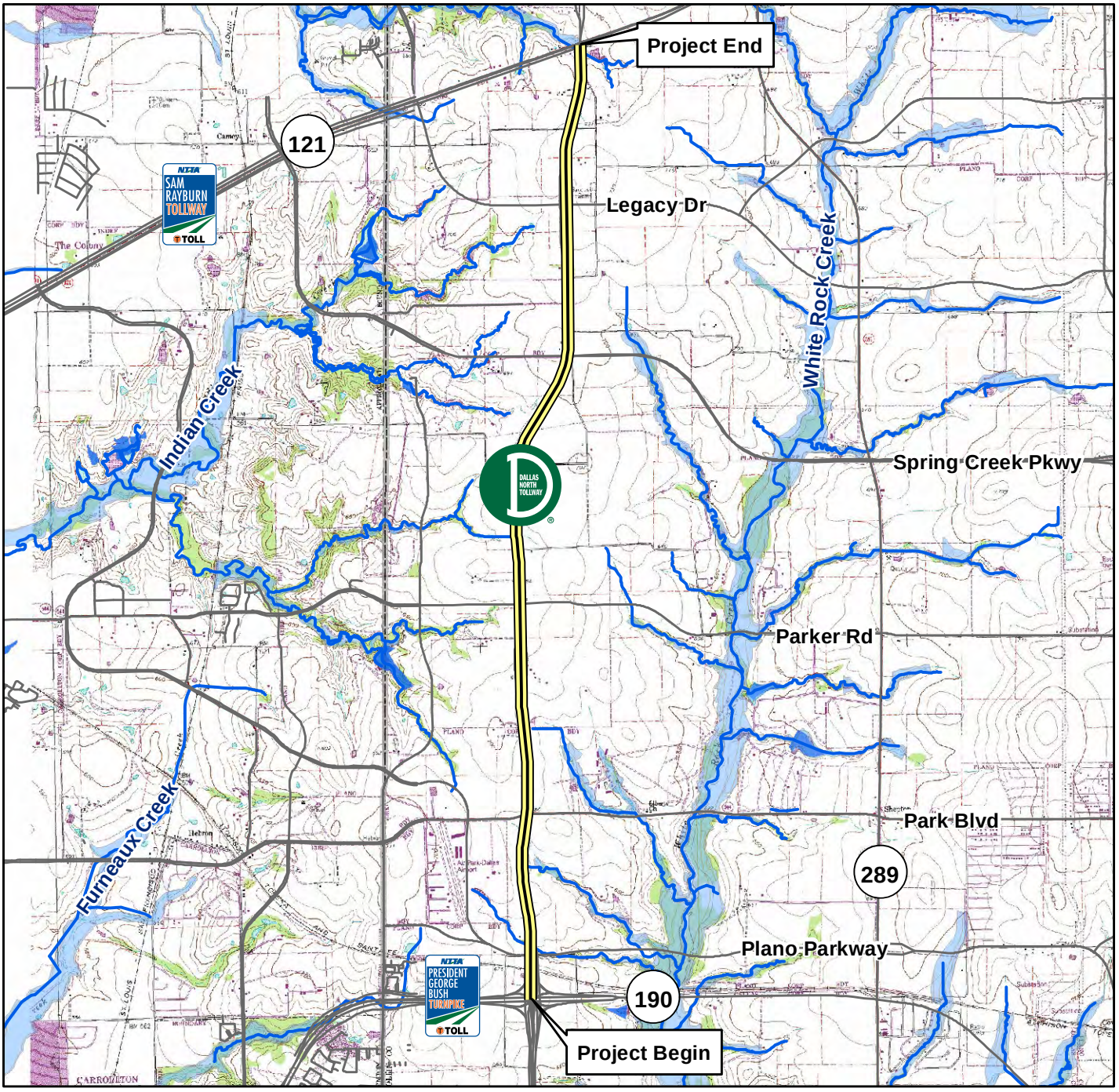
Enclosures:
- Project Vicinity Map
- USGS Topographic Map
- Right-of-Way Map
- Typical Sections
- Project Photographs

cc: Julie Morse - Environmental Manager
Michelle Dipple, RPA - Project Archeologist

ANTIQUITIES CODE OF TEXAS REVIEW
NO SURVEY REQUIRED
PROJECT MAY PROCEED
by Mark H. Denton
for Mark Wolfe
Executive Director, THC
Date 1-17-13
Track# 201303494

DNT: PGBT to SRT
DNT 4th Lane Expansion & DNT/PGBT Interchange Improvements
Project Vicinity Map

NTTA
NORTH TEXAS TOLLWAY AUTHORITY



N

NTTA
NORTH TEXAS TOLLWAY AUTHORITY

0 0.25 0.5 0.75 1 Miles

LEGEND

- Proposed Project Limits
- County Boundary
- Stream
- 100-Year Floodplain

Source: USGS Hebron, TX 7.5 Minute Quadrangle Map (USDA-NRCS, 2003) and FEMA Q3 Data (NCTCOG, 2011)

USGS TOPOGRAPHIC MAP

Dallas North Tollway (DNT)
from
President George Bush Turnpike (SH 190)
to
Sam Rayburn Tollway (SH 121)

190

Project Begin

Tributary to White Rock Creek

Proposed easement approximately 20 feet outside of existing easement.

Proposed easement extends approximately 25 feet from north end of existing easement.

Plano Parkway

Park Blvd.

Chapel Hill Blvd.

Parker Rd.

Windhaven Pkwy.

Spring Creek Pkwy.

Bishop Rd.

Legacy Dr.

Tennyson Pkwy.

Headquarters Dr.

121

Tributary to Lewisville Lake

Project End

Legend

- Existing ROW
- Existing Easement
- Stream
- 100-Year Floodplain
- Proposed ROW
- Proposed Easement

Denton County

Collin County

Dallas County

35E

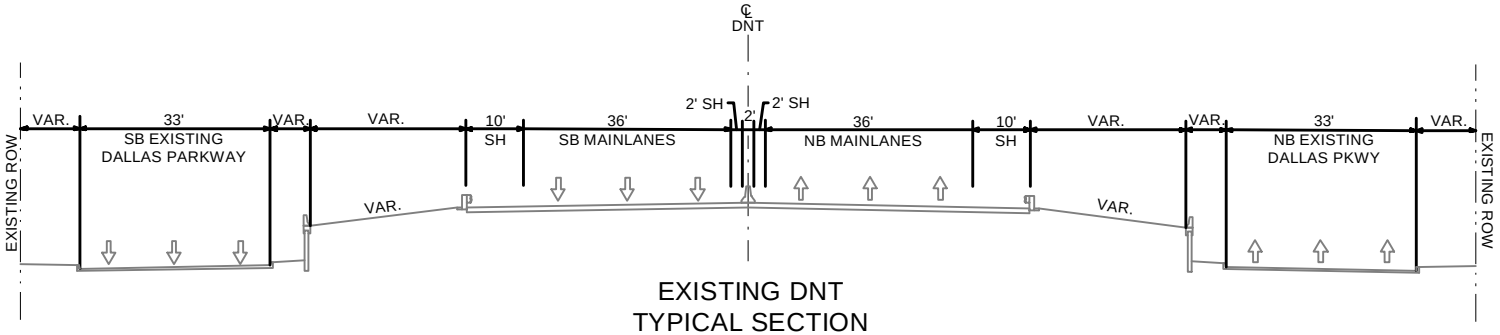
75

NTTA NORTH TEXAS TOLLWAY AUTHORITY

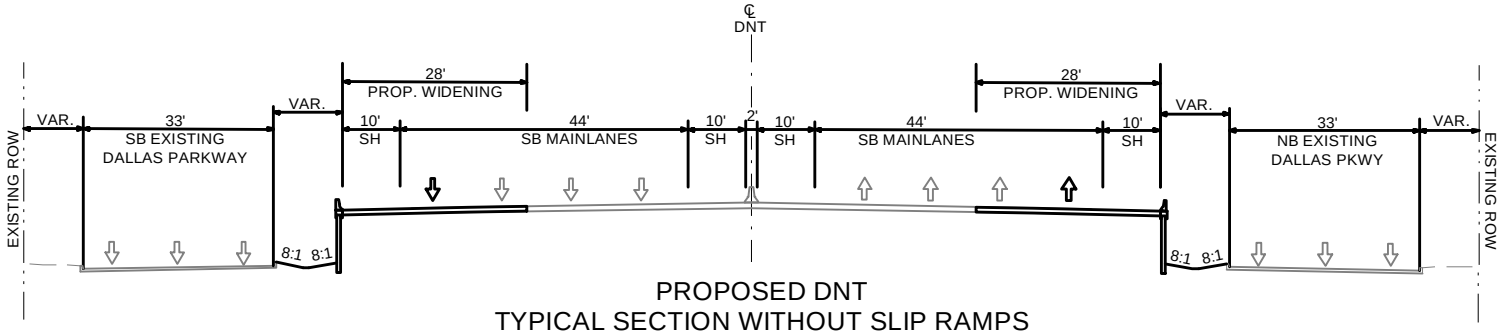
0 1,000 2,000 Feet

RIGHT-OF-WAY MAP

Dallas North Tollway (DNT)
from
President George Bush Turnpike (SH 190)
to
Sam Rayburn Tollway (SH 121)



EXISTING DNT
TYPICAL SECTION



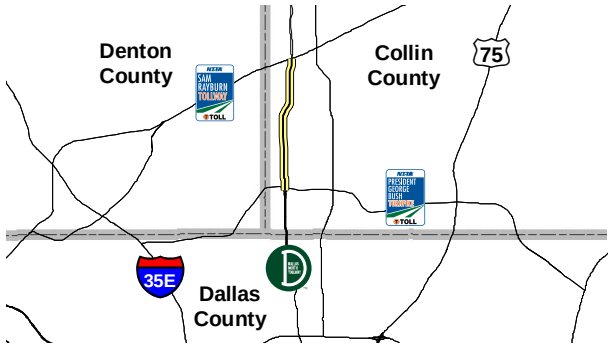
PROPOSED DNT
TYPICAL SECTION WITHOUT SLIP RAMPS
FROM PARK BLVD TO SAM RAYBURN TOLLWAY

NORTH TEXAS TOLLWAY AUTHORITY

LEGEND

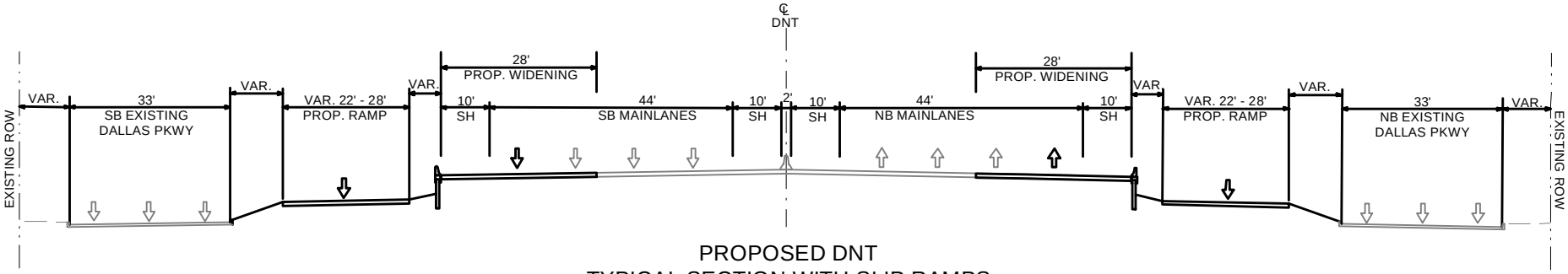
Proposed Project Limits

County Boundary

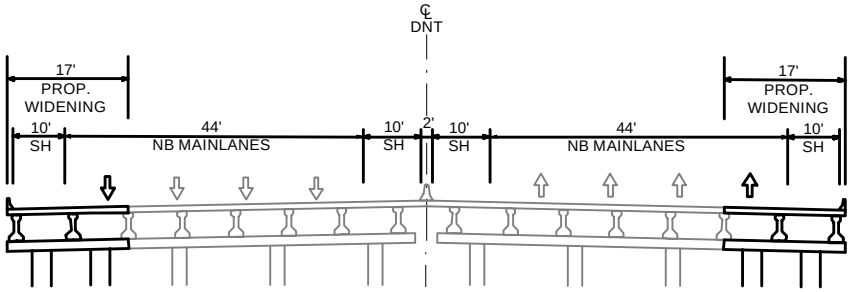


TYPICAL SECTIONS
SHEET 1 OF 2

Dallas North Tollway (DNT)
from
President George Bush
Turnpike (SH 190)
to
Sam Rayburn Tollway (SH 121)



PROPOSED DNT
TYPICAL SECTION WITH SLIP RAMPS
FROM PARK BLVD TO SAM RAYBURN TOLLWAY



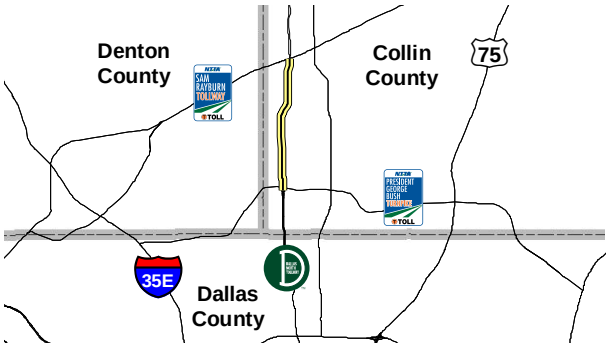
DNT TYPICAL BRIDGE SECTION WITH
PROPOSED BRIDGE WIDENING

NTTA®
NORTH TEXAS TOLLWAY AUTHORITY

LEGEND

Proposed Project Limits

County Boundary



TYPICAL SECTIONS
SHEET 2 OF 2

Dallas North Tollway (DNT)
from
President George Bush
Turnpike (SH 190)
to
Sam Rayburn Tollway (SH 121)

PROJECT PHOTOGRAPHS

Photo 1. Looking south along DNT at PBGT interchange (project begin).

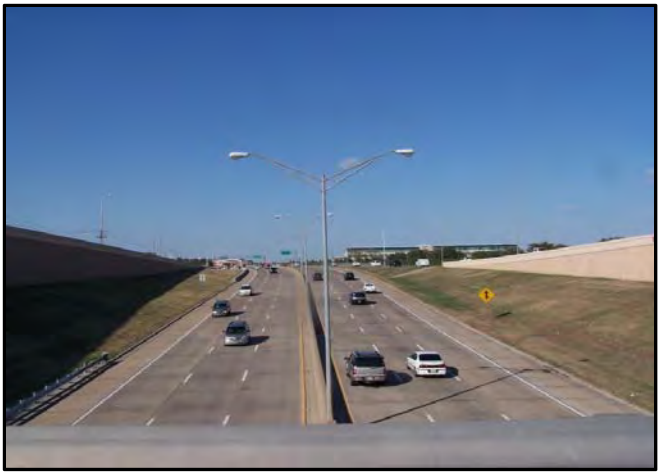


Photo 2. Looking north along DNT from Plano Pkwy.

Photo 3. Looking north along northbound frontage road of DNT, trees on the right potentially impacted by construction.

Photo 4. Looking south along northbound frontage road of DNT between Park Blvd. and Plano Pkwy.

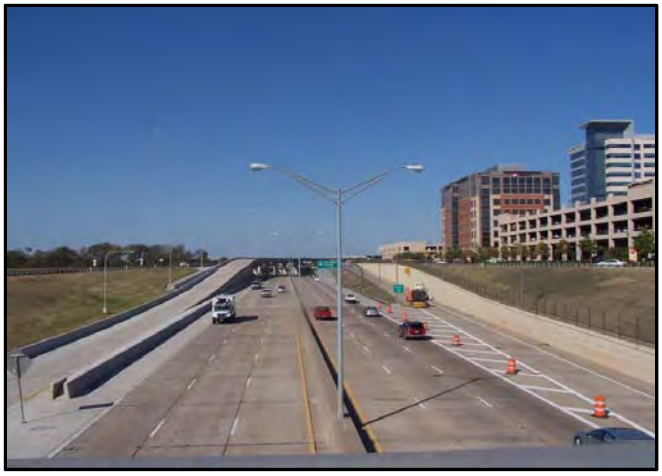


Photo 5. Looking north along DNT from Legacy Dr.

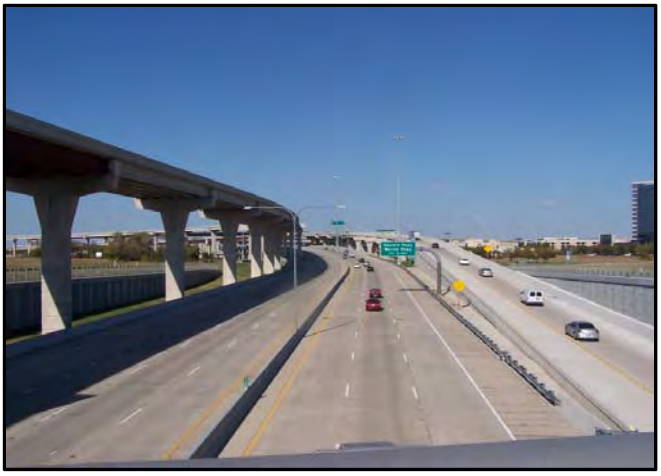


Photo 6. Looking north along DNT from Headquarters Dr. at SRT (project end).

Julie Morse

From: Craig Hancock
Sent: Thursday, December 20, 2012 2:20 PM
To: Julie Morse
Subject: DNT 4th Lane - Tree Ordinance

As part of the improvements to the DNT, approximately six (6) trees may potentially be impacted by construction activities, ROW acquisition and/or the extension of utility easements. These trees are located along the DNT northbound frontage road between Plano Parkway and Park Boulevard.

The City of Plano has a tree ordinance which regulates the removal and replacement of trees and landscape requirements for new construction and/or renovations. The ordinance also regulates the width and dimensions of clear zones and sight distances along public roadways. Removal of the six trees would be in compliance with the clear zone and sight distance requirements.

Additionally, per a conversation with Mark Bouma, P.E., NTTA Technical Oversight Leader, on 12/14/12, the NTTA is regulated under Section 366 of the State Transportation Code and is not subject to local ordinances; therefore, formal coordination with the City of Plano regarding the tree ordinance is not required and it is not necessary for the NTTA to replace or mitigate for the removal of trees along the ROW.

J. Craig Hancock, P.E.

HNTB Corporation
5910 W. Plano Parkway, Suite 200
Plano, TX 75093
Tel (214) 224-2434
Fax (972) 661-5614

NTTA®
NORTH TEXAS TOLLWAY AUTHORITY
5900 West Plano Parkway, Suite 100 • Plano, Texas 75026 • (214) 461-2000 • Fax (214) 528-4826 • www.ntta.org

December 14, 2012

Mr. David Noell
Air Park Association
P.O. Box 33
Addison, TX 75001

Dear Mr. Noell:

The North Texas Tollway Authority (NTTA) is currently in the planning process to expand the Dallas North Tollway (DNT) from the President George Bush Turnpike (PGBT) to the Sam Rayburn Tollway. The NTTA plans to expand the DNT by adding one toll lane in each direction and improve the traffic flow at the DNT/PGBT interchange by making ramping modifications. These improvements are anticipated to begin in 2015 in the general vicinity of Air Park-Dallas (1912 Airpark Lane, Plano, TX 75093) near Plano Parkway and Park Boulevard in Plano, Texas.

Although the improvements to the DNT do not trigger federal airway/highway clearance coordination requirements (23 Code of Federal Regulations 620.103), the NTTA coordinates with local airports within the vicinity of project construction to fulfill the general intent of the airway/highway guidance.

In the near future, the NTTA will initiate public involvement to keep the stakeholders and general public along the corridor informed of the progress of the project. Due to its proximity to the project, Air Park-Dallas will be included as a stakeholder and will be invited to meetings as appropriate.

Should you have any questions or wish to discuss the project, please contact Craig Hancock, P.E. at (214) 224-2434.

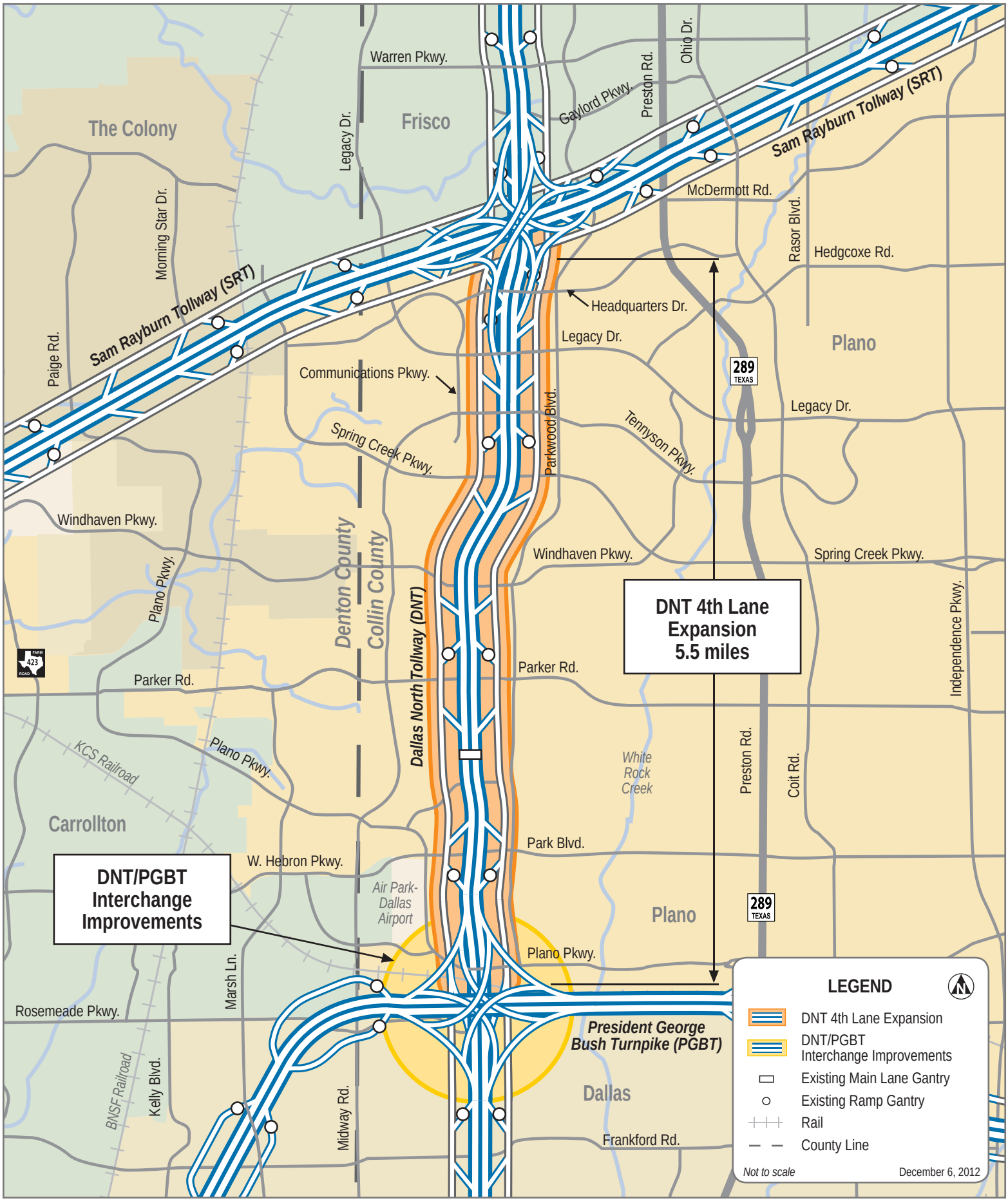
Sincerely,

Lori Shelton, AICP
Project Manager

LS/jch

Enclosures:
Project Location Map

cc: Julie Morse - Environmental Manager
Sam Lopez – Project Communications Manager



DNT: PGBT to SRT
DNT 4th Lane Expansion & DNT/PGBT Interchange Improvements
Project Location Map

NTTA
NORTH TEXAS TOLLWAY AUTHORITY

Supporting Information

Contents

NORTH TEXAS TOLLWAY AUTHORITY

5900 West Plano Parkway, Suite 100 ● Plano, Texas 75026 ● (214) 461-2000 ● Fax (214) 528-4826 ● www.ntta.org

SUPPORTING INFORMATION

Date: December 18, 2012

To: Lori Shelton

From: Julie Morse, Scott Inglish

Project: DNT 4th Lane Expansion and DNT/PGBT Interchange Improvements

Re: Waters of the U.S., Including Wetlands (Section 404 Impacts)

On-site evaluations along the approximately 5.5-mile project corridor conducted for the preliminary jurisdictional determination (PJD) identified four potential waters of the U.S. (labeled Waters 1-4 in the PJD Technical Report) within the proposed project limits. The linear feet and acreage amounts of these features were approximated as the features are contained within culverts through the proposed project area and the route each of the water features traverses through the culvert could not be readily determined. The four features total approximately 2,366 linear feet and 0.80 acre. These features have been previously impacted by the construction of DNT, PGBT, and SRT. However, the analysis indicates that these features are potentially subject to USACE jurisdiction under Section 404 of the CWA.

One feature, Water 1, would be temporarily impacted by the proposed project. The impacts would be a result of re-alignment of the culvert under DNT just north of PGBT. The temporary impacts would be authorized by Nationwide Permit (NWP) 14 – Linear Transportation Projects. A Preconstruction Notification would not be required. Compensatory mitigation is not proposed for the temporary impacts to Water 1 as the proposed project would not alter the current function of the stream segment within the DNT right-of-way. The stream segment currently functions as a drainage feature and flows through a concrete box culvert. After construction is completed, the stream segment will continue to function as a drainage feature and flow through a concrete lined culvert.

There are no impacts anticipated for Waters 2, 3, and 4 from the proposed project. A Section 404 permit would not be required for these features.

Table 1 contains the delineated features, anticipated impacts, and proposed permit. See the **Constraints Map** and **PJD Technical Report** for the water feature locations.

Table 1: Potential Waters of the U.S. within the Proposed Project Limits

Feature ID	Feature Name	*Delineated Areas (Acres/ Linear ft)	Potential Water of the U.S.? (Yes/No)	Existing Structure	Proposed Work or Structure	Approximate Permanent Impacts (Acres/ Linear ft)	*Approximate Temporary Impacts (Acres/ Linear ft)	Proposed Section 404 Permit
Water 1	Intermittent Tributary to White Rock Creek	0.02/ 425	Yes	Culvert	Culvert re-alignment	0.00/ 0	0.02/ 425	NWP 14
Water 2	Intermittent Tributary to White Rock Creek	0.15/ 344	Yes	Culvert	No work proposed.	0.00/ 0	0.00/ 0	None
Water 3	Intermittent Tributary to Indian Creek	0.03/ 297	Yes	Culvert	No work proposed.	0.00/ 0	0.00/ 0	None
Water 4	Unnamed Perennial Tributary to Lewisville Lake	1,300/ 0.60	Yes	Culvert	No work proposed.	0.00/ 0	0.00/ 0	None

* The linear feet and acreage amounts of these features were approximated as the features are contained within culverts through the proposed project area and the route each of the water features traverses through the culvert could not be readily determined.

JSI/jsi

NORTH TEXAS TOLLWAY AUTHORITY

5900 West Plano Parkway, Suite 100 ● Plano, Texas 75026 ● (214) 461-2000 ● Fax (214) 528-4826 ● www.ntta.org

SUPPORTING INFORMATION

Date: December 18, 2012

To: Lori Shelton

From: Julie Morse, Scott Inglish

Project: DNT 4th Lane Expansion and DNT/PGBT Interchange Improvements

Re: Navigable Waterways

The waterways crossed by the proposed project are tributaries to Indian Creek, White Rock Creek, and Lewisville Lake (see attached **Water Feature Photographs**). These features are not included on the Fort Worth District U.S. Army Corps of Engineers navigable water list. See the attached ***Navigable Waters of the United States in the Fort Worth, Albuquerque, and Tulsa Districts within the State of Texas*** for the complete list. This project does not involve work in or over a navigable water of the U.S.; therefore, Section 10 of the Rivers and Harbors Act does not apply.

JSI/jsi

Attachments:

Project Area Water Feature Photographs

Navigable Waters of the United States in the Fort Worth, Albuquerque, and Tulsa Districts within the State of Texas

WATER FEATURE PHOTOGRAPHS

Photo 1. Water 1 – Looking east from west side of DNT culvert at edge of ROW.

Photo 2. Water 2 – Looking east from east side of DNT at downstream channel outside proposed project area.

Photo 3. Water 4 – Looking southeast from north of SRT at stream as it exits culvert at edge of ROW.

US Army Corps of Engineers
Fort Worth District

Navigable Waters of the United States in the Fort Worth, Albuquerque, and Tulsa Districts Within the State of Texas

March 20, 1999

For purposes of Section 10 of the Rivers and Harbors Act of 1899, navigable waters of the United States are those waters that are subject to the ebb and flow of the tide and/or are presently being used, or have been used in the past, or may be susceptible for use to transport interstate or foreign commerce (33 CFR 329.4). Navigable waters include lakes and other on-channel impoundments of navigable rivers. Under Section 10, the U.S. Army Corps of Engineers (USACE) regulates any work in or affecting navigable waters of the United States. The following waters are considered to be navigable waters of the United States and thus fall within the jurisdiction of the USACE in the Fort Worth, Albuquerque, and Tulsa districts. Navigable waters in the Galveston District are determined on a case-by-case basis and, therefore, are not included in this list. The USACE district(s) within which these navigable waters lie are indicated as: SWF (Fort Worth District), SWT (Tulsa District), and SPA (Albuquerque District).

Angelina River: From Sam Rayburn Dam in Jasper County upstream to U.S. Highway 59 in Nacogdoches and Angelina counties and all USACE lands associated with B.A. Steinhagen Lake in Jasper and Tyler counties, Texas. [SWF]

Big Cypress Bayou: From the Texas-Louisiana state line in Marion County, Texas, upstream to Ellison Creek Reservoir in Morris County, Texas. [SWF]

Brazos River: From the point of intersection of Grimes, Waller, and Washington counties upstream to Whitney Dam in Hill and Bosque counties, Texas. [SWF]

Colorado River: From the Bastrop-Fayette county line upstream to Longhorn Dam in Travis County, Texas. [SWF]

Neches River: USACE lands associated with B.A. Steinhagen Lake in Jasper and Tyler counties, Texas. [SWF]

Red River: From the U.S. Highway 71 bridge at the Texas-Arkansas state line upstream to the Oklahoma-Arkansas state line and from Denison Dam on Lake Texoma upstream to Warrens Bend, approximately 7.25 miles north-northeast of Marysville, in Cooke County, Texas. [SWT]

Rio Grande: From the Zapata-Webb county line upstream to the point of intersection of the Texas-New Mexico state line and Mexico. [SWF, SPA]

Sabine River: From the point of intersection of the Sabine-Vernon parish line in Louisiana with Newton County, Texas upstream to the Sabine River-Big Sandy Creek confluence in Upshur County, Texas. [SWF]

Sulphur River: From the Texas-Arkansas state line upstream to Wright Patman Dam in Cass and Bowie counties, Texas. [SWF]

Trinity River: From the point of intersection of Houston, Madison, and Walker counties upstream to Riverside Drive in Fort Worth, Tarrant County, Texas. [SWF]

NORTH TEXAS TOLLWAY AUTHORITY

5900 West Plano Parkway, Suite 100 ● Plano, Texas 75026 ● (214) 461-2000 ● Fax (214) 528-4826 ● www.ntta.org

SUPPORTING INFORMATION

Date: December 18, 2012

To: Lori Shelton

From: Julie Morse, Scott Inglish

Project: DNT 4th Lane Expansion and DNT/PGBT Interchange Improvements

Re: Water Quality (Storm Water and Impaired Waters)

Storm Water

The proposed project would involve 5 acres or more of earth disturbance (see attached **Earth Disturbance Map**). The Texas Commission on Environmental Quality (TCEQ) Texas Pollutant Discharge Elimination System (TPDES) Construction General Permit (CGP) would apply. A Storm Water Pollution Prevention Plan (SW3P) would need to be implemented and a Construction Site Notice (CSN) posted on the construction site. A Notice of Intent (NOI) and a Notice of Termination (NOT) would be required.

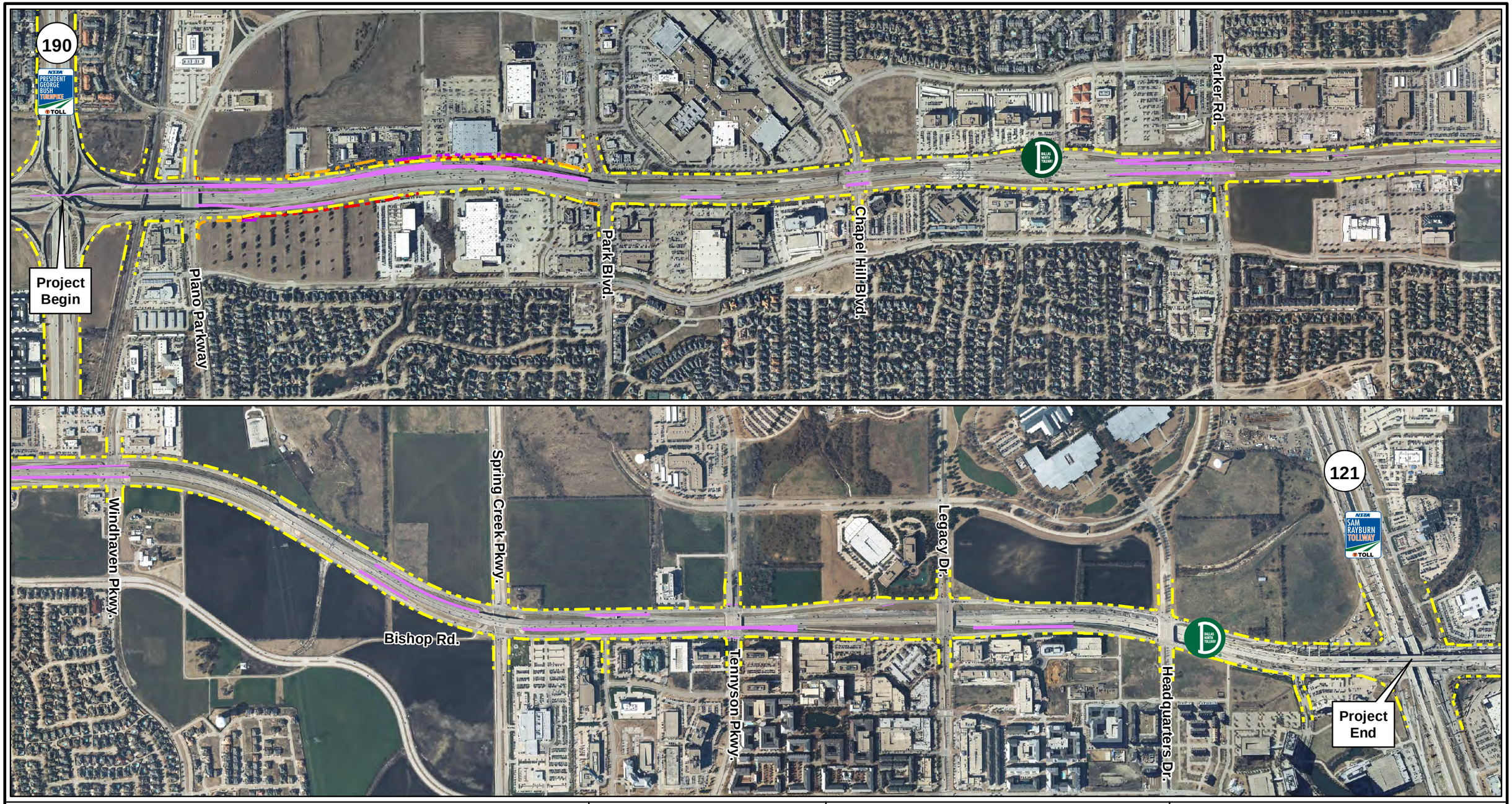
Impaired Waters

There are two stream segments within a 5-mile radius of the proposed project that were assessed for the 2010 Section 303(d) list. These two stream segments are White Rock Creek above White Rock Lake (Segment 0827A) and Lewisville Lake (Segment 0823). Tributaries that intersect the proposed project corridor flow to each of these segments. Only those segments that are impaired are included in the Section 303(d) list and the segments are listed numerically in the report. These two segments are not included in the list (see attached page from the **Texas 303(d) List** omitting these segments). Therefore, runoff from this project would not discharge directly into a Section 303(d) listed threatened/impaired water or into a stream within 5 miles upstream of a Section 303(d) listed threatened/impaired water. The approved 2010 Texas Integrated Report – Texas 303(d) List (Category 5) was utilized in this assessment. It was approved by the Environmental Protection Agency November 18, 2011.

JSI/jsi

Attachments:

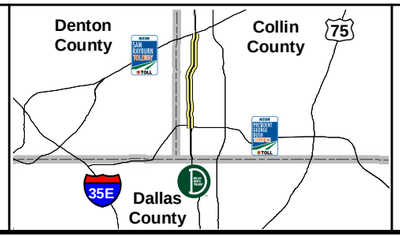
Earth Disturbance Map
2010 Texas Integrated Report – Texas 303(d) List (Category 5)



Legend

- Existing ROW
- Existing Easement
- Earth Disturbance Area (Approximate Total = 62.17 acres)
- Proposed ROW
- Proposed Easement

NTTA
NORTH TEXAS TOLLWAY AUTHORITY



N

0 1,000 2,000 Feet

EARTH DISTURBANCE MAP

Dallas North Tollway (DNT)
from
President George Bush Turnpike (SH 190)
to
Sam Rayburn Tollway (SH 121)

SegID: 0821D **East Fork Trinity River above Lake Lavon (unclassified water body)**

A portion of the East Fork Trinity River extending from the confluence with Lake Lavon (segment 0821) to the upper end of the water body (NHD RC 12030106000074) in Collin County, Texas.

Parameter(s)		*Category*	*Year Segment First Listed*
bacteria		**5b**	**2010**
0821D_01	Entire water body		

SegID: 0822A **Cottonwood Branch (unclassified water body)**

A 6 mile stretch of Cottonwood Branch running upstream from confluence with Hackberry Creek, to Valley View Road in Dallas County.

Parameter(s)		*Category*	*Year Segment First Listed*
bacteria		**5b**	**2006**
0822A_02	A 3. 5 mile stretch of Cottonwood Branch running upstream from approximately 0.5 miles downstream of N. Story Rd. to Valley View Rd, Dallas, Co.		

SegID: 0822B **Grapevine Creek (unclassified water body)**

From the confluence with Elm Fork Trinity River in Dallas County upstream to its headwaters west of International Parkway at DFW Airport in Tarrant County

Parameter(s)		*Category*	*Year Segment First Listed*
bacteria		**5b**	**2006**
0822B_01	Entire water body		

SegID: 0828A **Village Creek (unclassified water body)**

From the confluence with Lake Arlington in Tarrant County to the headwaters east of Joshua in Johnson County

Parameter(s)		*Category*	*Year Segment First Listed*
bacteria		**5b**	**2010**
0828A_01	From Lake Arlington to the headwaters		

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SUPPORTING INFORMATION

Date: December 18, 2012

To: Lori Shelton

From: Julie Morse, Scott Inglish

Project: DNT 4th Lane Expansion and DNT/PGBT Interchange Improvements

Re: Floodplains (100-Year Floodplain and Trinity River CDC Regulatory Zone)

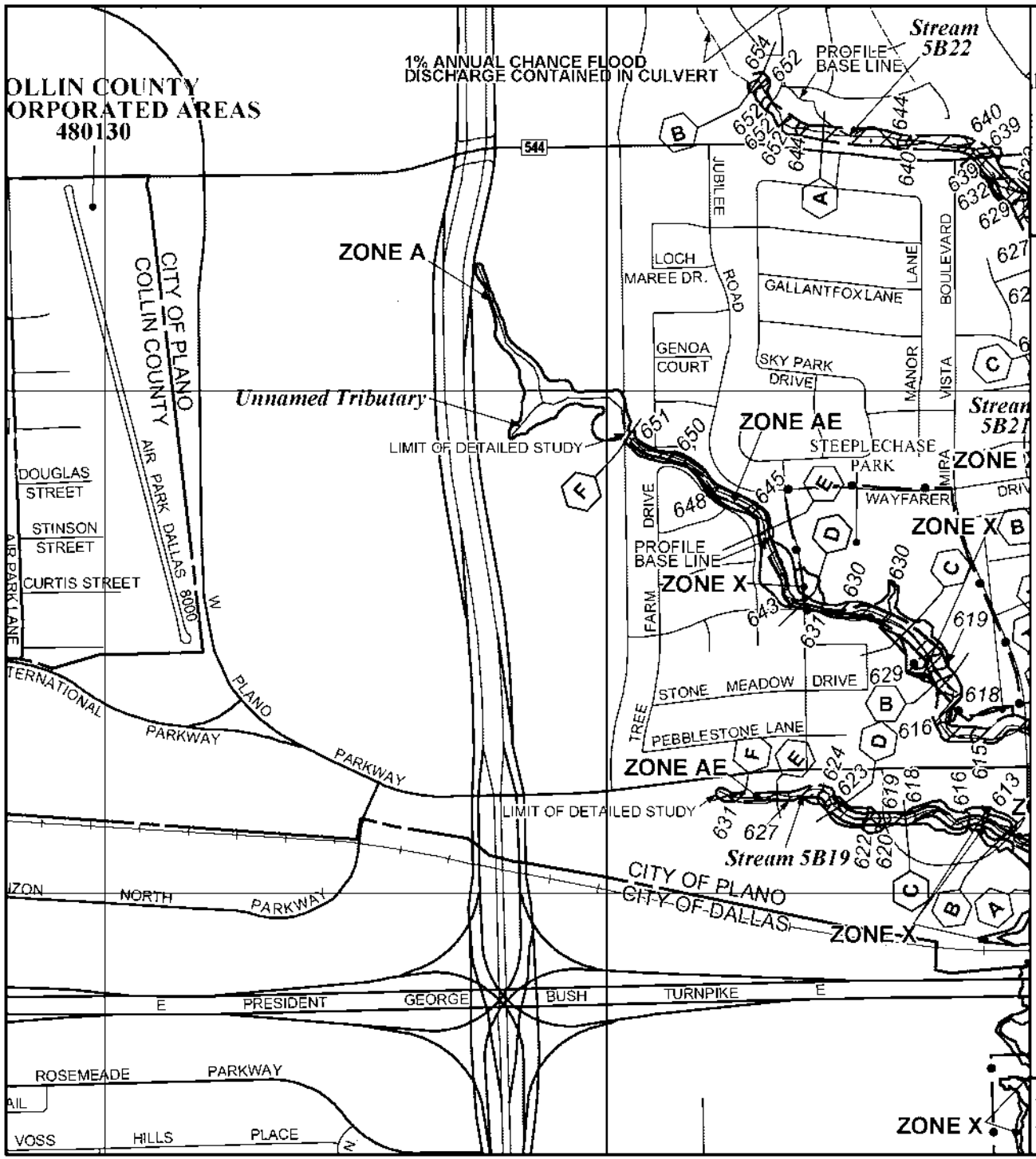
Based on a review of the Federal Emergency Management Agency (FEMA) Flood Insurance Rate Maps (FIRM) numbers 48085C0365J (Effective June 2, 2009) and 48085C0355J (Effective June 2, 2009) for Collin County, Texas, there is one location where the 100-year floodplain is immediately adjacent to the proposed project along the DNT northbound frontage road south of Park Boulevard. The 100-year floodplain is not located within the proposed project right-of-way. The proposed project would not result in any modifications to the base flood elevation (BFE). See the **USGS Topographic Map** exhibit, the attached **FEMA FIRMs,** and the attached project email from the design engineer.

The proposed project is not located within the Trinity River Corridor Development Certificate (CDC) Regulatory Zone. The attached **Trinity River Corridor Map** shows the proposed project area in relation to the CDC zones.

JSI/jsi

Attachments:

- FEMA FIRMs
- Trinity River Corridor Map
- Design Engineer Email



P SCALE 1" = 1000'

1000 2000 FEET

METERS

IRM

LOOD INSURANCE RATE MAP

OLLIN COUNTY,

EXAS

ND INCORPORATED AREAS

NEL 365 OF 600

E MAP INDEX FOR FIRM PANEL LAYOUT)

ONTAINS:

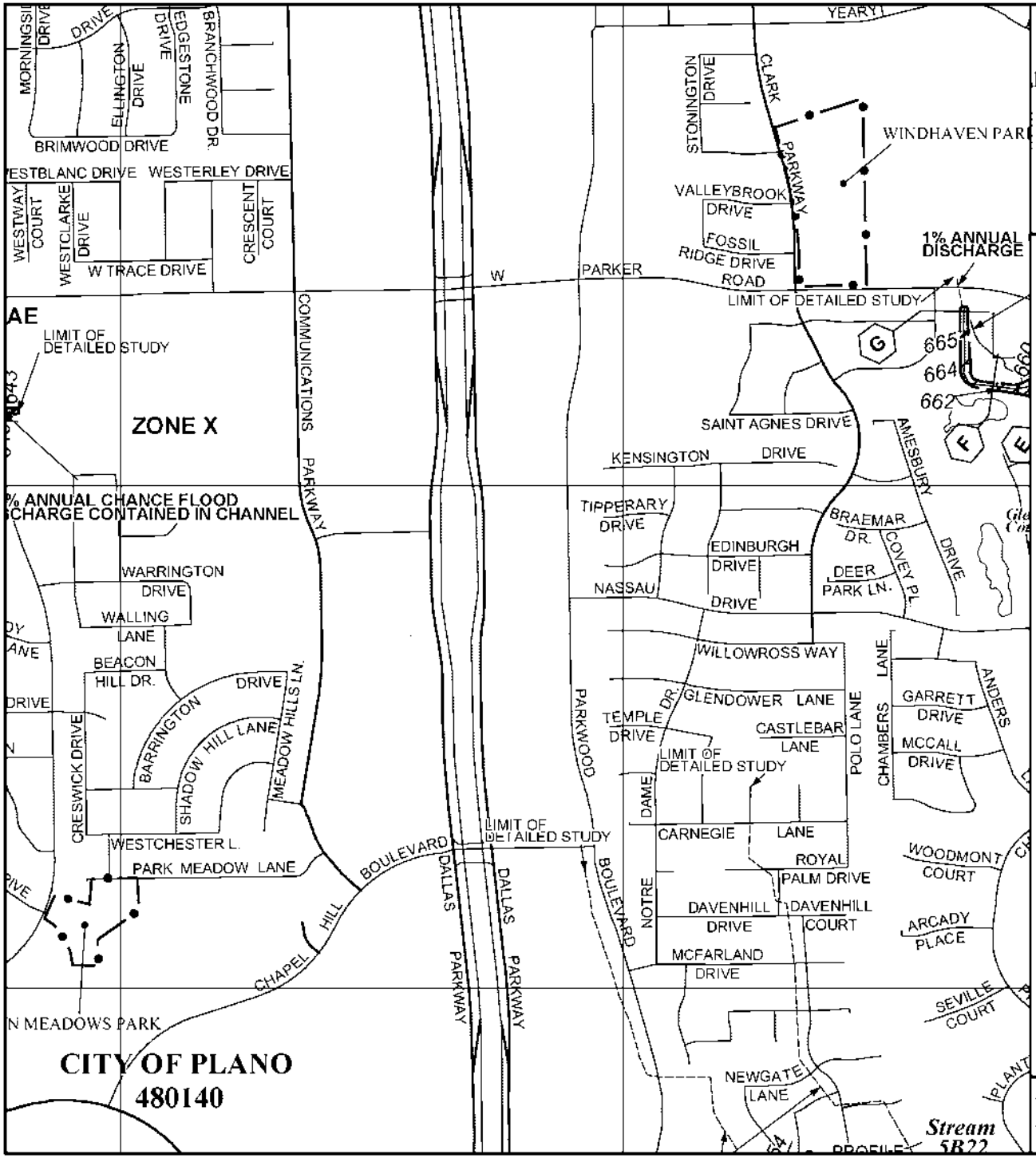
MMUNITY	NUMBER	PANEL	SUFFIX
LIN COUNTY	480130	0365	J
RCLLTON, CITY OF	480167	0365	J
LAS, CITY OF	480171	0365	J
NO, CITY OF	480140	0365	J

ice to User: The **Map Number** shown below should be d when placing map orders; the **Community Number** shown ve should be used on insurance applications for the subject mmunity

MAP NUMBER
48085C0365J

EFFECTIVE DATE
JUNE 2, 2009

Federal Emergency Management Agency



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1000 2000 FEET

METERS

IRM

LOOD INSURANCE RATE MAP

OLLIN COUNTY,

EXAS

ND INCORPORATED AREAS

NEL 365 OF 600

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ROLLTON, CITY OF	480167	0365	J
LAS, CITY OF	480171	0365	J
NO, CITY OF	480140	0365	J

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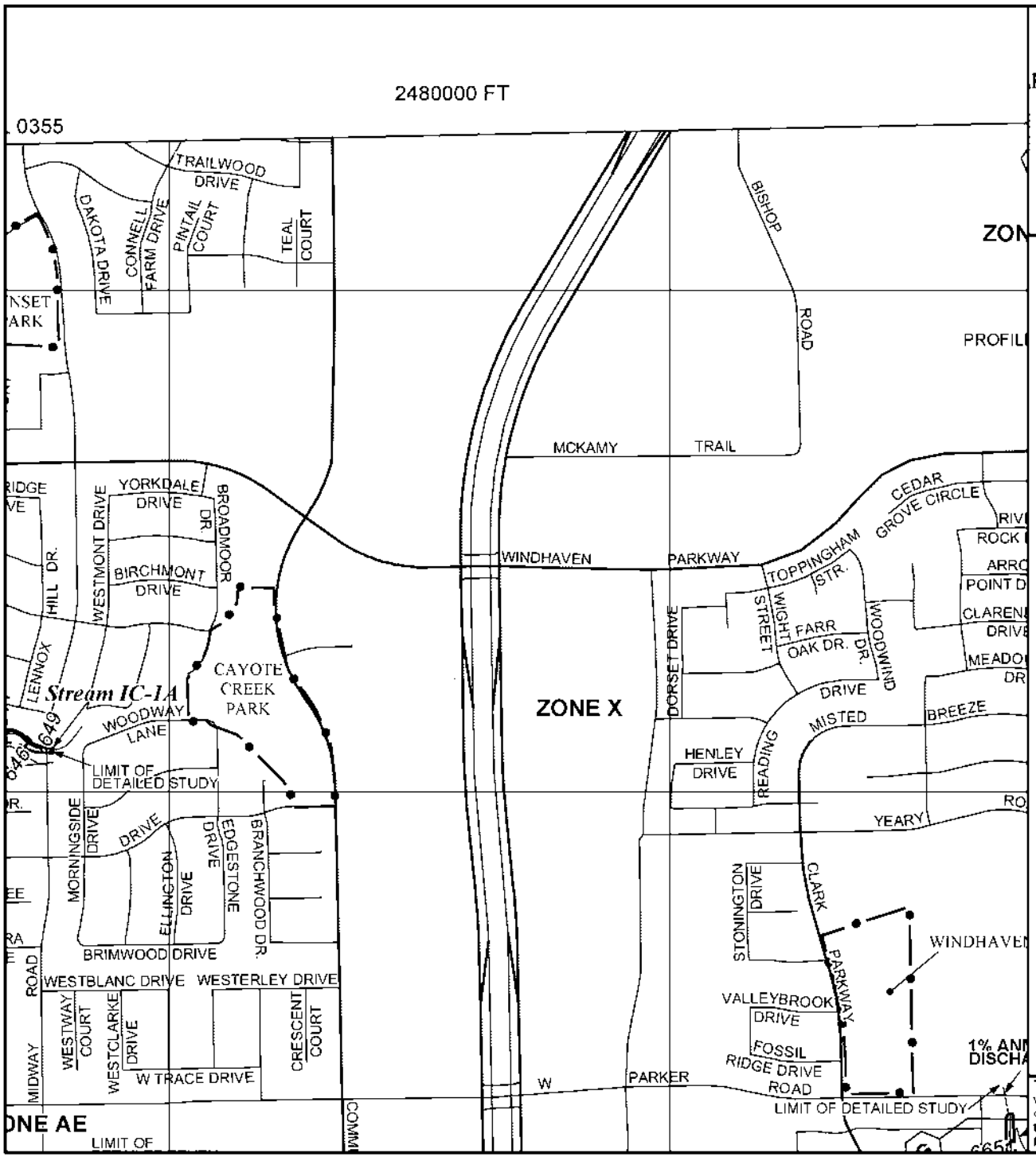
MAP NUMBER
48085C0365J

EFFECTIVE DATE
JUNE 2, 2009

Federal Emergency Management Agency

This is an official copy of a portion of the above referenced flood map. It was extracted using F-MIT On-Line. This map does not reflect changes or amendments which may have been made subsequent to the date on the title block. For the latest product information about National Flood Insurance Program flood maps check the FEMA Flood Map Store at www.msc.fema.gov



P SCALE 1" = 1000'

1000 2000

FEET

METERS

IRM

OOD INSURANCE RATE MAP

OLLIN COUNTY,

EXAS

ND INCORPORATED AREAS

NEL 365 OF 600

E MAP INDEX FOR FIRM PANEL LAYOUT)

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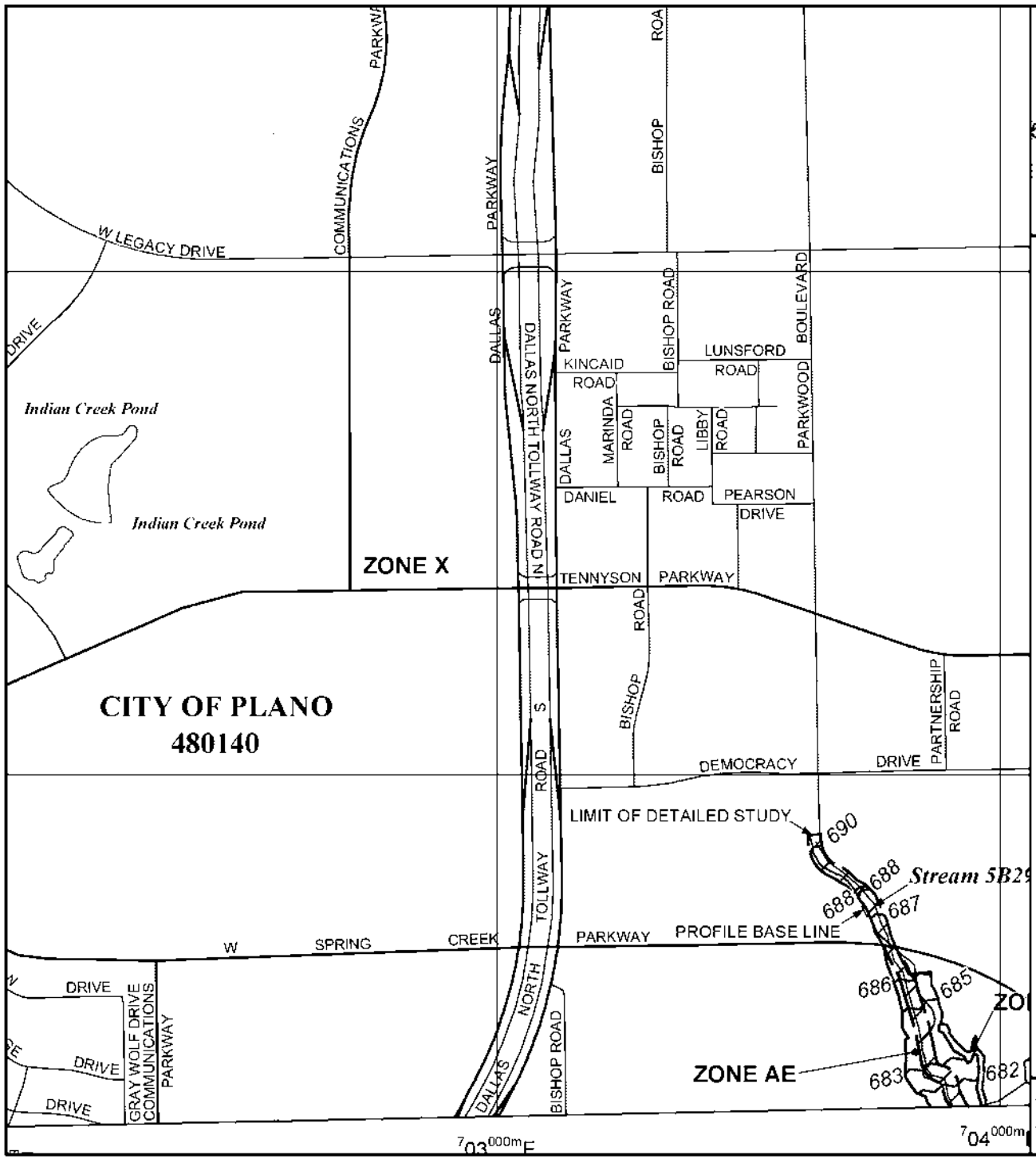


MAP SCALE 1" = 1000'

500 0 1000 2000 FEET

0 200 600 METE

NFIP PANEL 0355J

NATIONAL FLOOD INSURANCE PROGRAM

FIRM

FLOOD INSURANCE RATE MAP

COLLIN COUNTY, TEXAS

AND INCORPORATED AREAS

PANEL 355 OF 600

(SEE MAP INDEX FOR FIRM PANEL LAYOUT)

CONTAINS:

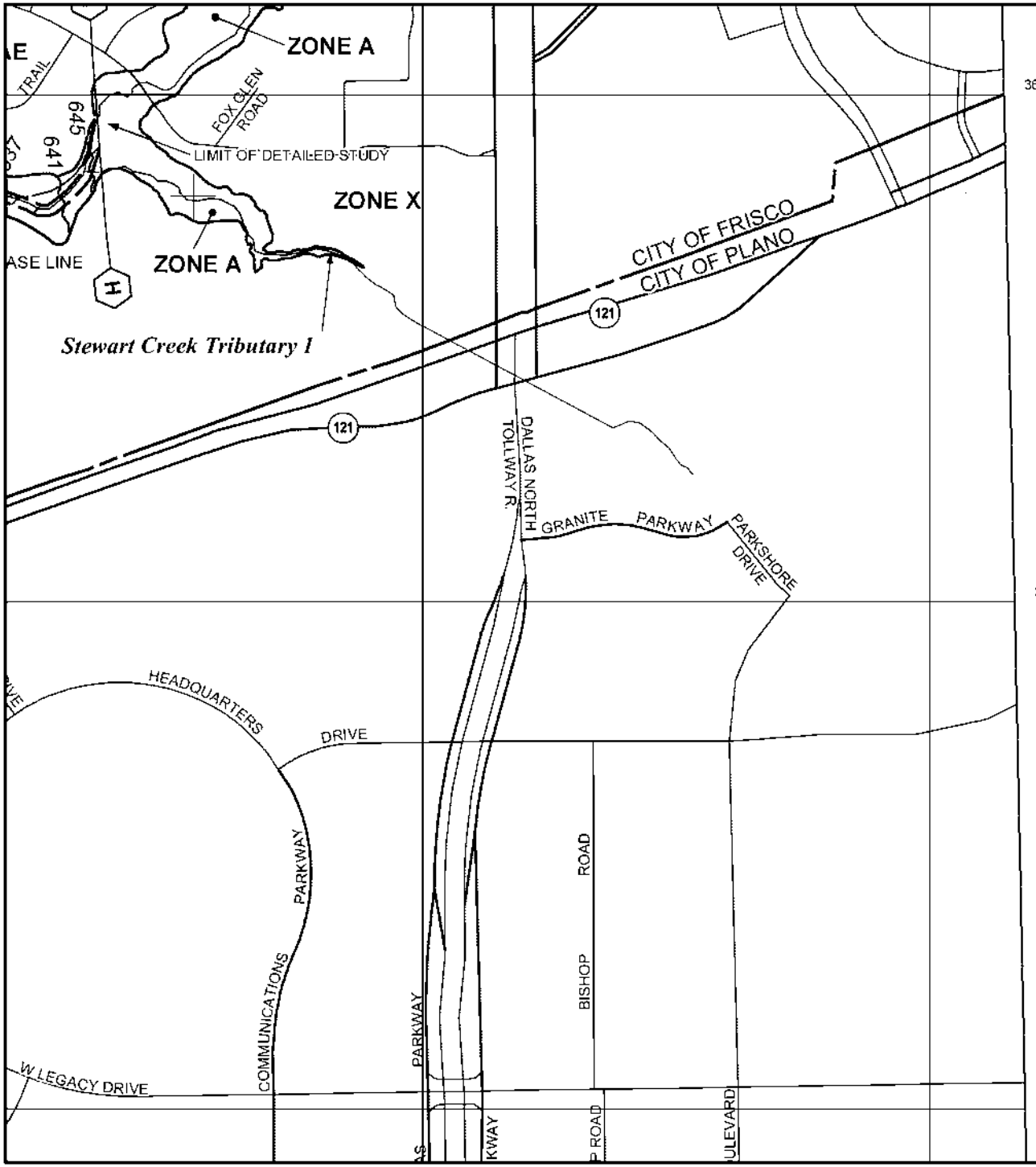
COMMUNITY	NUMBER	PANEL	SUFFIX
FRISCO, CITY OF	480134	0355	J
PLANO, CITY OF	480140	0355	J

Notice to User: The **Map Number** shown below should be used when placing map orders; the **Community Number** shown above should be used on insurance applications for the subject community.

MAP NUMBER
48085C0355J

MAP REVISED
JUNE 2, 2009

Federal Emergency Management Agency



MAP SCALE 1" = 1000'

500 0 1000 2000 FEET

0 200 600 METE

NFIP PANEL 0355J

NATIONAL FLOOD INSURANCE PROGRAM

FIRM

FLOOD INSURANCE RATE MAP

COLLIN COUNTY, TEXAS

AND INCORPORATED AREAS

PANEL 355 OF 600

(SEE MAP INDEX FOR FIRM PANEL LAYOUT)

CONTAINS:

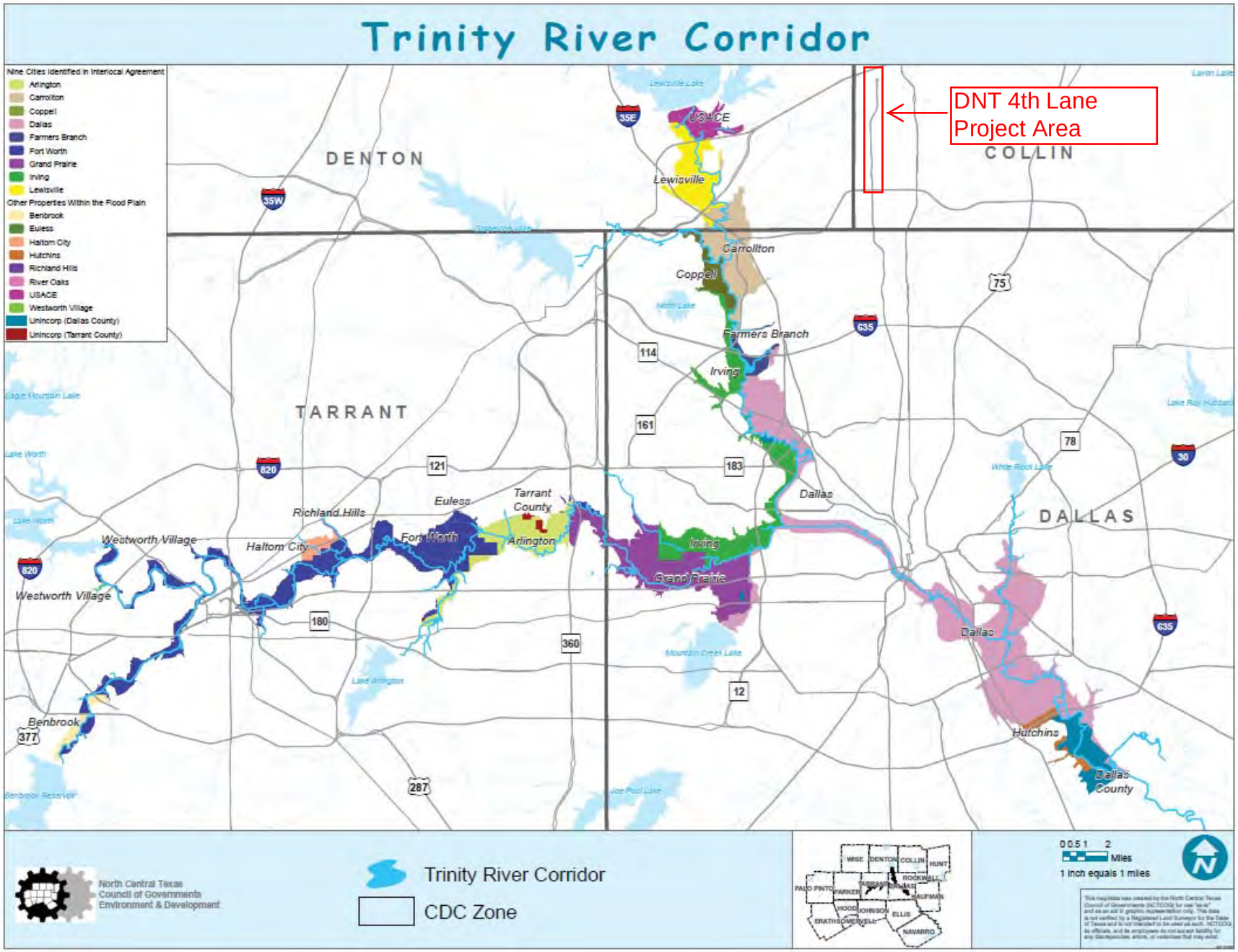
COMMUNITY	NUMBER	PANEL	SUFFIX
FRISCO, CITY OF	480134	0355	J
PLANO, CITY OF	480140	0355	J

Notice to User: The **Map Number** shown below should be used when placing map orders; the **Community Number** shown above should be used on insurance applications for the subject community.

MAP NUMBER
48085C0355J

MAP REVISED
JUNE 2, 2009

Federal Emergency Management Agency


Trinity River Corridor
Nine Cities Identified in Interlocal Agreement
Arlington
Carrollton
Coppell
Dallas
Farmers Branch
Fort Worth
Grand Prairie
Irving
Lewisville
Other Properties Within the Flood Plain
Benbrook
Euless
Haltom City
Hutchins
Richland Hills
River Oaks
USACE
Westworth Village
Unincorp (Dallas County)
Unincorp (Tarrant County)
DNT 4th Lane
Project Area
DENTON
COLLIN
TARRANT
DALLAS
Lewisville
Carrollton
Coppell
Farmers Branch
Irving
Dallas
Grand Prairie
Tarrant
County
Euless
Arlington
Richland Hills
Fort Worth
Haltom City
Westworth Village
Benbrook
Hutchins
Dallas
County
35E
35W
820
121
114
161
183
75
635
78
30
180
360
12
377
287
North Central Texas
Council of Governments
Environment & Development
Trinity River Corridor
CDC Zone
0 0.5 1 2
Miles
1 inch equals 1 miles

Julie Morse

From: Rusty Ozmer
Sent: Wednesday, December 19, 2012 1:06 PM
To: Scott Inglish
Cc: Julie Morse
Subject: Re: DNT 4th Lane Improvements

Scott,

The proposed DNT 4th lane improvements along DNT from PGBT to SRT do not affect the base flood elevation of FEMA floodplains as there are no FEMA crossings along the project limits.

Rusty

Russell K. Ozmer, P.E.

HNTB Corporation
5910 W. Plano Parkway, Suite 200
Plano, Texas 75093

Tel (972) 628-3142
Cell (214) 470-8076
Fax (972) 661-5614
www.hntb.com

NORTH TEXAS TOLLWAY AUTHORITY

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SUPPORTING INFORMATION

Date: December 18, 2012

To: Lori Shelton

From: Julie Morse, Scott Inglish

Project: DNT 4th Lane Expansion and DNT/PGBT Interchange Improvements

Re: Vegetation and Wildlife (Unusual Vegetative Features, Wildlife Special Habitat Features, and Migratory Bird Treaty Act)

Approximately 1.47 acres of additional right-of-way (ROW) would be required for the proposed project. The additional ROW would be acquired along either side of DNT between Plano Parkway and Park Boulevard. The additional ROW is located on the southbound side of DNT within two developed parcels and one maintained (mowed) parcel and on the northbound side of DNT within one maintained (mowed) parcel and one developed parcel. Dominant herbaceous vegetation within these parcels consists of Bermuda grass. Various landscape shrubs and trees are also present. Approximately six trees are located within the proposed ROW on the northbound side of DNT (see Photo 3 of the **Project Photographs** exhibit).

Unusual Vegetative Features and Wildlife Special Habitat Features

There are no unusual vegetative features (i.e. fencerow vegetation, riparian vegetation, large or specimen trees, and/or unusual or isolated stands of vegetation) within the proposed project ROW. The proposed project is located along a primarily urban corridor that is developed with a few adjacent parcels that are undeveloped or are currently being farmed. The few trees that may be removed as a result of the proposed project are not large or specimen trees.

Wildlife special habitat features include bottomland hardwoods, caves, cliffs and bluffs, native prairies ponds, seeps or springs, snags or groups of snags, water bodies, existing bridges with known or easily observed bird or bat colonies. The special habitat features (water bodies) present within the proposed project limits consist of the water features. The water features are contained within concrete box culverts within the proposed project ROW and do not contain riparian vegetation (see **Water Feature Photographs** attached to Navigable Waterways Supporting Information). Although the water bodies may provide a travel corridor for some wildlife, they do not contain wildlife habitat. The one box culvert that would be re-aligned is located north of PGBT. The portion of the culvert to be re-aligned is under the DNT mainlanes and the northbound frontage road. No bird nests or colonies were observed at the culverts during the November 2012 site visit. There were no bird or bat colonies observed at the existing bridge structures within the proposed project limits.

The proposed project would not impact any unusual vegetative features or wildlife special habitat features.

Migratory Bird Treaty Act

Migratory avian species are protected under the Migratory Bird Treaty Act (MBTA) of 1918 which states that it is unlawful to kill, capture, collect, possess, buy, sell, trade, or transport any migratory bird, nest, young, feather, or egg in part or in whole, without a federal permit issued in accordance within the Act's policies and regulations. Between October 1 and February 15, the contractor should remove all old migratory bird nests from any structures that would be affected by the proposed project and complete any bridge work and/or vegetation clearing. In addition, the contractor should be prepared to prevent migratory birds from building nests between February 15 and October 1. In the event that migratory birds are encountered on-site during project construction, adverse impacts on protected birds, active nests, eggs, and/or young should be avoided. Consultation with the NTTA Project Delivery Program Management Consultant Environmental Compliance Oversight staff confirmed that compliance with the MBTA will be monitored during the construction of the proposed project.

Prior to construction, a brief survey of the trees to be removed by qualified personnel should be performed to determine if any active nests are present. No bird nests or colonies were observed during the site visit, and no impacts to migratory birds are anticipated.

JSI/jsi

NORTH TEXAS TOLLWAY AUTHORITY

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SUPPORTING INFORMATION

Date: December 18, 2012

To: Lori Shelton

From: Julie Morse, Scott Inglish

Project: DNT 4th Lane Expansion and DNT/PGBT Interchange Improvements

Re: Threatened and Endangered Species

The pertinent U.S. Fish and Wildlife Service (USFWS) and Texas Parks and Wildlife Department (TPWD) annotated county lists of threatened, endangered, and rare species were reviewed (see attached **USFWS and TPWD Lists**).

The single USFWS federally-listed species for Collin County is the endangered whooping crane. This species migrates through the plains throughout most of the state to the coast to winter in the coastal marshes of Aransas, Calhoun, and Refugio counties. This species could be a potential migrant through the project area. Because the proposed project area is urbanized, it is very unlikely that this species would be present at any time within the proposed project area. There would be no effect to this species from the proposed project.

There are 12 avian species, 1 crustacean, 2 mammals, 5 mollusks, and 4 reptiles listed as threatened, endangered, or species of concern on the TPWD list. Because the proposed project area is in a developed area and is dominated by herbaceous vegetation and landscape vegetation, preferred habitat for the listed terrestrial species is not present. The streams that cross the proposed project are contained within concrete box culverts and do not provide preferred habitat for the aquatic species. There would be no effect to the state-listed species from the proposed project.

The TPWD also maintains special species lists by county through the Texas Natural Diversity Database (TXNDD). The TXNDD is a geo-referenced database of documented sightings of rare, threatened, and endangered species of Texas. TXNDD information was received from the TPWD December 18, 2012. The TXNDD review search radius was 10 miles from the proposed project limits. There are two known element occurrences of state- or federally-listed species (Texas garter snake and a rookery) and one managed area (Lewisville Lake) within 10 miles, but no known element occurrences or managed areas recorded within 1.5 miles of the proposed project limits. The TXNDD is a potential presence database that cannot be interpreted as presence/absence data. The TXNDD search results (**Element Occurrences Report and Managed Areas Report**) are attached.

All of the avian species are considered migratory and as such, are also protected under the Migratory Bird Treaty Act (MBTA). Due to the lack of suitable habitat within the proposed project for the listed avian species, it is unlikely that these species would be encountered during construction. Appropriate measures would be taken to ensure compliance with the MBTA. See the Vegetation and Wildlife Supporting Information for more details regarding the MBTA.

The proposed project would require a federal permit. Section 404 Nationwide Permit 14 – Linear Transportation Projects would authorize temporary impacts to one potential jurisdictional water associated with the re-alignment of a culvert. However, a Preconstruction Notification would not be required for the permit. In addition, an Environmental Evaluation or National Environmental Policy Act document would not be required for compliance with Section 7 of the Endangered Species Act as there would be no adverse impacts to federally-listed threatened or endangered species or their habitat.

JSI/jsi

Attachments:

- USFWS Threatened and Endangered Species List for Collin County
- TPWD Annotated County List of Rare Species for Collin County
- TPWD TXNDD Element Occurrences Report
- TPWD TXNDD Managed Areas Report

Ecological Services

Southwest Region

Ecological Services
Endangered Species
Electronic Library
Environmental Contaminants
Energy
Partners Program
Texas Coastal Program
National Wetlands Inventory
Field Offices

Back to Start

List of species by county for Texas:

Counties Selected: Collin

Select one or more counties from the following list to view a county list:

Anderson
Andrews
Angelina
Aransas
Archer

View County List

Collin County

Common Name	Scientific Name	Species Group	Listing Status	Species Image	Species Distribution Map	Critical Habitat	More Info
whooping crane	*Grus americana*	Birds	E, EXPN				P

Last updated: November 1, 2012

The mission of the U.S. Fish and Wildlife Service is working with others to conserve, protect, and enhance fish, wildlife, plants and their habitats for the continuing benefit of the American people.

Last Revision: 2/28/2011 4:14:00 PM

COLLIN COUNTY

BIRDS

		Federal Status	State Status
American Peregrine Falcon	*Falco peregrinus anatum*	DL	T

year-round resident and local breeder in west Texas, nests in tall cliff eyries; also, migrant across state from more northern breeding areas in US and Canada, winters along coast and farther south; occupies wide range of habitats during migration, including urban, concentrations along coast and barrier islands; low-altitude migrant, stopovers at leading landscape edges such as lake shores, coastlines, and barrier islands.

Arctic Peregrine Falcon	*Falco peregrinus tundrius*	DL	

migrant throughout state from subspecies' far northern breeding range, winters along coast and farther south; occupies wide range of habitats during migration, including urban, concentrations along coast and barrier islands; low-altitude migrant, stopovers at leading landscape edges such as lake shores, coastlines, and barrier islands.

Bald Eagle	*Haliaeetus leucocephalus*	DL	T

found primarily near rivers and large lakes; nests in tall trees or on cliffs near water; communally roosts, especially in winter; hunts live prey, scavenges, and pirates food from other birds

Henslow's Sparrow	*Ammodramus henslowii*		

wintering individuals (not flocks) found in weedy fields or cut-over areas where lots of bunch grasses occur along with vines and brambles; a key component is bare ground for running/walking

Interior Least Tern	*Sterna antillarum athalassos*	LE	E

subspecies is listed only when inland (more than 50 miles from a coastline); nests along sand and gravel bars within braided streams, rivers; also know to nest on man-made structures (inland beaches, wastewater treatment plants, gravel mines, etc); eats small fish and crustaceans, when breeding forages within a few hundred feet of colony

Peregrine Falcon	*Falco peregrinus*	DL	T

both subspecies migrate across the state from more northern breeding areas in US and Canada to winter along coast and farther south; subspecies (F. p. anatum) is also a resident breeder in west Texas; the two subspecies' listing statuses differ, F.p. tundrius is no longer listed in Texas; but because the subspecies are not easily distinguishable at a distance, reference is generally made only to the species level; see subspecies for habitat.

Piping Plover	*Charadrius melodus*	LT	T

wintering migrant along the Texas Gulf Coast; beaches and bayside mud or salt flats

Sprague's Pipit	*Anthus spragueii*	C	

only in Texas during migration and winter, mid September to early April; short to medium distance, diurnal migrant; strongly tied to native upland prairie, can be locally common in coastal grasslands, uncommon to rare further west; sensitive to patch size and avoids edges.

Western Burrowing Owl	*Athene cunicularia hypugaea*		

open grasslands, especially prairie, plains, and savanna, sometimes in open areas such as vacant lots near human habitation or airports; nests and roosts in abandoned burrows

COLLIN COUNTY

BIRDS

		Federal Status	State Status
White-faced Ibis	*Plegadis chihi*		T

prefers freshwater marshes, sloughs, and irrigated rice fields, but will attend brackish and saltwater habitats; nests in marshes, in low trees, on the ground in bulrushes or reeds, or on floating mats

Whooping Crane	*Grus americana*	LE	E

potential migrant via plains throughout most of state to coast; winters in coastal marshes of Aransas, Calhoun, and Refugio counties

Wood Stork	*Mycteria americana*		T

forages in prairie ponds, flooded pastures or fields, ditches, and other shallow standing water, including salt-water; usually roosts communally in tall snags, sometimes in association with other wading birds (i.e. active heronries); breeds in Mexico and birds move into Gulf States in search of mud flats and other wetlands, even those associated with forested areas; formerly nested in Texas, but no breeding records since 1960

CRUSTACEANS

		Federal Status	State Status
A crayfish	*Procambarus steigmani*		

burrower in long-grass prairie; all animals were collected with traps, thus there is no knowledge of depths of burrows; herbivore; crepuscular, nocturnal

MAMMALS

		Federal Status	State Status
Plains spotted skunk	*Spilogale putorius interrupta*		

catholic; open fields, prairies, croplands, fence rows, farmyards, forest edges, and woodlands; prefers wooded, brushy areas and tallgrass prairie

Red wolf	*Canis rufus*	LE	E

extirpated; formerly known throughout eastern half of Texas in brushy and forested areas, as well as coastal prairies

MOLLUSKS

		Federal Status	State Status
Fawnsfoot	*Truncilla donaciformis*		

small and large rivers especially on sand, mud, rocky mud, and sand and gravel, also silt and cobble bottoms in still to swiftly flowing waters; Red (historic), Cypress (historic), Sabine (historic), Neches, Trinity, and San Jacinto River basins.

Little spectaclecase	*Villosa lienosa*		

creeks, rivers, and reservoirs, sandy substrates in slight to moderate current, usually along the banks in slower currents; east Texas, Cypress through San Jacinto River basins

Louisiana pigtoe	*Pleurobema riddellii*		T

streams and moderate-size rivers, usually flowing water on substrates of mud, sand, and gravel; not generally known from impoundments; Sabine, Neches, and Trinity (historic) River basins

COLLIN COUNTY

MOLLUSKS

		Federal Status	State Status
Texas heelsplitter	*Potamilus amphichaenus*		T

quiet waters in mud or sand and also in reservoirs. Sabine, Neches, and Trinity River basins

Wabash pigtoe *Fusconaia flava*

creeks to large rivers on mud, sand, and gravel from all habitats except deep shifting sands; found in moderate to swift current velocities; east Texas River basins, Red through San Jacinto River basins; elsewhere occurs in reservoirs and lakes with no flow

REPTILES

		Federal Status	State Status
Alligator snapping turtle	*Macrochelys temminckii*		T

perennial water bodies; deep water of rivers, canals, lakes, and oxbows; also swamps, bayous, and ponds near deep running water; sometimes enters brackish coastal waters; usually in water with mud bottom and abundant aquatic vegetation; may migrate several miles along rivers; active March-October; breeds April-October

Texas garter snake *Thamnophis sirtalis annectens*

wet or moist microhabitats are conducive to the species occurrence, but is not necessarily restricted to them; hibernates underground or in or under surface cover; breeds March-August

Texas horned lizard	*Phrynosoma cornutum*		T

open, arid and semi-arid regions with sparse vegetation, including grass, cactus, scattered brush or scrubby trees; soil may vary in texture from sandy to rocky; burrows into soil, enters rodent burrows, or hides under rock when inactive; breeds March-September

Timber/Canebrake rattlesnake	*Crotalus horridus*		T

swamps, floodplains, upland pine and deciduous woodlands, riparian zones, abandoned farmland; limestone bluffs, sandy soil or black clay; prefers dense ground cover, i.e. grapevines or palmetto

Element Occurrence Record

Scientific Name: Quadrula pustulosa
Occurrence #: 3 **Eo Id:** 9443
Track Status: Track all extant and selected historical EOs
Common Name: Pimpleback
TX Protection Status:
Global Rank: G5 **State Rank:** SNR **Federal Status:**

Location Information:

Directions:

Mussels were observed in the Elm Fork Trinity River, 0.5 mile below Lewisville Lake dam.

Survey Information:

First Observation: 2000-05-02 **Survey Date:** 2000-05-02 **Last Observation:** 2000-05-02
Eo Type: **Eo Rank:** E **Eo Rank Date:** 2000-05-02
Observed Area:

Comments:

General Description:

Comments: 2000: The survey was a random shoreline and shallow water search.

Protection Comments:

Management Comments:

Data:

EO Data: 2 May 2000: 49 live individuals were observed.

Reference:

Citation:

Texas Parks and Wildlife Department. 2009. Spreadsheet of Texas Mussel Watch data, 1998-2009 and miscellaneous documents supporting these observations.

Specimen:

Element Occurrence Record

Scientific Name: Rookery **Occurrence #:** 479 **Eo Id:** 3672

Common Name: **Track Status:** Track all extant and selected historical EOs

TX Protection Status:

Global Rank: GNR **State Rank:** SNR **Federal Status:**

Location Information:

Directions:

AT INTERSECTION OF JOSEY LANE AND KELLER SPRINGS ROAD AND SURROUNDING, IN NORTH CARROLLTON

Survey Information:

First Observation: 1990 **Survey Date:** **Last Observation:** 1990

Eo Type: **Eo Rank:** **Eo Rank Date:**

Observed Area:

Comments:

General Description:

Comments: COLONY NUMBER 555-070

Protection Comments:

Management Comments:

Data:

EO Data: NESTING COLONY OF THE SNOWY EGRET, LITTLE BLUE HERON, CATTLE EGRET

Reference:

Citation:

Martin, Catrina. 1991. Texas Colonial Waterbird Census Summary - 1990. Compiled for Texas Parks & Wildlife Dept. and Texas Colonial Waterbird Society. 13 March 1991.

Specimen:

Element Occurrence Record

Scientific Name: Thamnophis sirtalis annectens **Occurrence #:** 20 **Eo Id:** 434

Common Name: Texas Garter Snake **Track Status:** Track all extant and selected historical EOs

TX Protection Status:

Global Rank: G5T3 **State Rank:** S3 **Federal Status:**

Location Information:

Directions:

LAKE DALLAS

Survey Information:

First Observation: **Survey Date:** **Last Observation:**

Eo Type: **Eo Rank:** **Eo Rank Date:**

Observed Area:

Comments:

General Description:

Comments:

Protection Comments:

Management Comments:

Data:

EO Data:

Reference:

Citation:

Specimen:

Baylor University, Bryce C. Brown Collection at Strecker Museum. No Date. H. Kirby, Catalog # 4644 BCB, SM.

Occurrence List for Quads Surrounding Request Area

Scientific Name:	Common Name:	Occurrence Number:	State Status:	Federal Status:	Eo Id:
Pleurobema riddellii	Louisiana Pigtoe	1	T		9494
Quercus buckleyi series	Texas Oak Series	4			2487
Rookery		337			2952
Rookery		475			7731
Schizachyrium scoparium-sorghastrum nutans series	Little Bluestem-indiangrass Series	105			2293
Thamnophis sirtalis annectens	Texas Garter Snake	19			432
Ulmus crassifolia-celtis laevigata series	Cedar Elm-sugarberry Series	20			520

Managed Area Information

Managed Area Name: Lewisville Lake (Uscoe) **Acres:** 1,575.00

Description:

CORPS PARKS ON LEWISVILLE LAKE

Comments:

OTHER PARKS AROUND LAKE INCLUDE: STEWARTS CREEK AND WYNNEWOOD PARKS OPERATED BY THE COLONY; EASTVALE PARK OPERATED BY CITY OF EASTVALE; LAKE LEWISVILLE STATE PARK OPERATED BY TPWD; WILLOW GROVE PARK OPERATED BY LAKE DALLAS; WEST COPPERAS BRANCH PARK OPERATED BY HIGHLAND VILLAGE; AND LEWISVILLE LAKE PARK OPERATED BY LEWISVILLE

Manager:

RESERVOIR MANAGER
1801 NORTH MILL STREET

LEWISVILLE,TX 75067
214 434-1666

Texas Natural Diveristy Database
Texas Parks and Wildlife

NORTH TEXAS TOLLWAY AUTHORITY

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SUPPORTING INFORMATION

Date: December 17, 2012

To: Lori Shelton

From: Julie Morse, Beth Reed

Project: DNT 4th Lane Expansion and DNT/PGBT Interchange Improvements

Re: Historic-age Resources

Introduction

The NTTA is a political subdivision of the State of Texas and as such is subject to compliance with Chapter 26 of the Antiquities Code of Texas (ACT). Because the proposed fourth lane expansion and interchange improvements project does not include any federal funding participation and due to the absence of any known federal involvement, the following supporting information for historic-age resources is not regulated by Section 106 of the National Historic Preservation Act (NHPA) of 1966, as amended, or the First Amended Programmatic Agreement among the Federal Highway Administration (FHWA), the Texas Department of Transportation (TxDOT), the Texas State Historic Preservation Officer, and the Advisory Council on Historic Preservation regarding the Implementation of Transportation Undertakings (PA-TU), Stipulation VIII and 43 TAC 2.24(j)(3). However, in the interest of full disclosure, this supporting information has been prepared to conform to the standards set forth by Chapter 26 of the ACT, Section 106 of the NHPA, and the above mentioned PA-TU. In the event that a federal permit is required for impacts resulting from the proposed project, the NTTA will coordinate this information with the federal agency responsible for issuing the permit to fully comply with Section 106 of the NHPA.

Project Description

The overall length of the project is approximately 5.5 miles from President George Bush Turnpike (PGBT) to Sam Rayburn Tollway (SRT). The project is primarily proposed within existing right-of-way (ROW), with the exception of the PGBT interchange improvements which would require 1.47 acres of ROW acquisition and 0.49 acre of extended utility easements between Plano Parkway and Park Boulevard. Existing and proposed ROW boundaries and utility easements are shown on the **Constraints Map**. The total area to be impacted by construction activities is 62.17 acres.

Project Setting

The proposed project site is located in Plano, Texas, approximately 15 miles north of Dallas in southwestern Collin County. Collin County is primarily within the Blackland Prairie region of Texas and the surface is generally level to gently rolling. Refer to the **USGS Topographic Map** for this project.

Settlement of the county first occurred during 1840-1860 with the establishment of small family owned farms that grew primarily corn and wheat. During this time, the lack of transportation facilities, limited markets, and the general isolation of the county from commercial resources restricted the growth of agricultural development despite that the soil of the Blackland Prairie region was considered the richest agricultural region in Texas. However, the arrival of the

railroads in 1872 removed these obstacles and began a period of great economic growth in Collin County. By the mid-1890s, six railroads ran through the county connecting farmers to retail markets throughout Texas. With the incentive of accessible outlets for their products, the number of farms and crop production increased dramatically between 1870 and 1920. In addition, the Shawnee Trail, one of the principal routes by which Texas longhorn cattle were driven to railheads to the north, encouraged ranching in the area. Used just before and after the Civil War, the Shawnee Trail ran up from Austin, through Dallas, and crossed through eastern Collin County. The agricultural prosperity of the county was reflected in the Plano area where farming continued to be an important factor in the county's economy through the 20th century. However, during the 1970s, the dramatic increase in the population of the Dallas metropolitan area, combined with the introduction of light industry, lead to Plano becoming the commercial, financial, and educational center of Collin County which it remains to the present.

Methodology

Area of Potential Effects (APE) and Cut-off Date

The proposed project will primarily consist of widening the mainlanes of the existing alignment by one lane in each direction as well as improvements to the interchange between the DNT and the PGBT. Although the majority of the work will be conducted within the existing ROW, approximately 1.47 acres of additional ROW will be required. Therefore, the APE for this project is 1,300 feet from the edge of the proposed or existing ROW.

The Secretary of the Interior's guidelines for National Register of Historic Places (NRHP) eligibility criteria prescribes that a resource must be 50 years of age or older to be considered for inclusion in the NRHP. The term historic-age resource refers to any building, structure, object, or district that is, or would be, 50 years of age or older at the time of project letting for construction. At the time of this research, the projected letting date for this project was 2015; therefore, 1964 was the cut-off date used for determining which resources met the definition of historic-age resources.

Literature Review

A historic resources literature and records background search was performed to identify the location of any previously designated historic resources in the project APE. This review included an examination of records of the Texas Historical Commission (THC) via the online Texas Historic Sites Atlas (Atlas). Specifically, the locations of NRHP resources, Recorded Texas Historic Landmarks (RTHL), State Archeological Landmarks (SAL), and Official Texas Historical Markers (OTHM), as well as the locations of other historic markers and cemeteries were reviewed. Additional on-line resources, including the Handbook of Texas, the City of Plano, the Collin County Historical Society, as well as recent and historic USGS quadrangle maps and Texas State Department of Highways general highway maps were consulted.

As a result of the literature review, one historic-age resource and two OTHMs were identified within the project APE. The historic-age resource is the Baccus Cemetery, located north of Legacy Drive at Bishop Street, east of DNT (see Sheet 5 of the **Constraints Map**). This cemetery is identified on the Atlas as Cemetery Number COL-C058 and the earliest grave dates to 1847. An OTHM (Atlas Marker Number 272) associated with this cemetery, entitled "Baccus Cemetery," is located on the site. The cemetery was originally named Cook Cemetery and renamed by Henry Cook in 1915 to honor his daughter Rachel Baccus. The site once contained a church, the Baccus Christian Church Sanctuary; however, the church was disbanded sometime during the 1930s and is no longer extant. The church appears on the 1936 Collin County general highway map, but by 1961 it no longer appears on the map.

An OTHM (Atlas Marker Number 6174), entitled “Liberty Baptist Church” is located on the north side of West Park Boulevard within the APE. The church that is currently on the site is not historic-age, and the historic church dating to 1885 is no longer extant.

An examination of the project area on aerial maps shows several undeveloped and/or agricultural parcels within the APE that are adjacent to DNT. Investigation revealed that much of this land is owned by the Haggard family, a pioneer Plano family who historically owned much of the land that is present-day Plano. As a result of this information, additional background research was conducted to determine the likelihood of this agricultural land having historical significance. Research indicates that Clinton Haggard settled in the Plano area circa 1850. Haggard’s descendants still own land throughout Plano, including the 100+ acre family homestead located well outside the project area along West Park Boulevard near Custer Road.

In evaluating resources related to the Haggard family, the undeveloped parcels would most likely be associated with the Haggard homestead, and not significant as individual resources. The homestead, however, has been significantly altered and likely would not retain sufficient integrity of design, materials, and workmanship for NRHP eligibility. In addition, the homestead parcel was recently sold to developers, and a large residential subdivision is planned for the property which will further diminish its historic integrity of setting, feeling, and association. Plano possesses a better example of an early pioneer farmstead in the Heritage Farmstead Museum, also located outside the APE. The Heritage Farmstead Museum includes the NRHP-listed Farrell-Wilson House, and is an intact example of a 19th century Plano pioneer farmstead that retains a high degree of integrity and significance. It is unlikely that properties associated with the Haggard family, including the land parcels adjacent to DNT, would be NRHP-eligible. However, further investigation of the Haggard parcels would be needed to confirm NRHP eligibility.

Recommendations

No historic resources were identified within the project APE as a result of the literature review that are NRHP-listed or previously determined NRHP-eligible.

One historic-age resource, the Baccus Cemetery, has been identified within the project APE. Although the cemetery is identified on the Atlas, it is not listed in the NRHP, nor is it known to have been determined previously NRHP-eligible. In addition, it is not known to have any other historic designation. Cemeteries are typically evaluated for NRHP eligibility using Criteria Consideration D and must possess primary significance from persons of transcendent importance, from age, from distinctive design features, or from association with historic events. An evaluation of this resource would be required before a recommendation of NRHP eligibility could be determined.

The two OTHMs located within the APE are not historic-age resources for purposes of Section 106 and do not need to be evaluated for NRHP eligibility. Neither OTHM is located within the ROW of the proposed project which is anticipated to stay within the existing ROW where these markers are located. However, if the proposed project requires that a marker be moved, either permanently or temporarily, arrangements should be coordinated with the THC.

Initial research indicates that the agricultural parcels within the APE associated with the Haggard family do not retain sufficient significance or integrity for NRHP eligibility. Should a determination of NRHP eligibility be needed, field examination and further research regarding parcels associated with the prominent Haggard is recommended.

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Bill Conrad, “Plano City Council Approves Haggard Farm Development,” Star Local News, accessed online at: http://www.pegasusnews.com/news/2011/nov/23

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BFR/bfr

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SUPPORTING INFORMATION

Date: November 30, 2012

To: Lori Shelton

From: Julie Morse, Michelle Dippel

Project: DNT 4th Lane Expansion and DNT/PGBT Interchange Improvements

Re: Archeological Resources

Introduction

The NTTA is a political subdivision of the State of Texas and as such is subject to compliance with Chapter 26 of the Antiquities Code of Texas (ACT). Because the proposed fourth lane expansion and interchange improvements project does not include any federal funding participation and due to the absence of any known federal involvement, the following background research for archeological resources is not regulated by Section 106 of the National Historic Preservation Act (NHPA) of 1966, as amended, or the First Amended Programmatic Agreement among the Federal Highway Administration (FHWA), the Texas Department of Transportation (TxDOT), the Texas State Historic Preservation Officer, and the Advisory Council on Historic Preservation regarding the Implementation of Transportation Undertakings (PA-TU), Stipulation VIII and 43 TAC 2.24(j)(3). However, in the interest of full disclosure, this background research has been conducted to conform to the standards set forth by Chapter 26 of the ACT, Section 106 of the NHPA, and the above mentioned PA-TU. In the event that a federal permit is required for impacts resulting from the proposed project, the NTTA will coordinate the findings of this study with the federal agency responsible for issuing the permit to fully comply with Section 106 of the NHPA.

Project Description

The overall Area of Potential Effects (APE) for the Dallas North Tollway (DNT) expansion and interchange improvements project encompasses approximately 204 acres. The APE typically ranges from 300 to 400 feet wide and is approximately 5.5 miles long from President George Bush Turnpike (PGBT) to Sam Rayburn Tollway (SRT). The APE encompasses the proposed construction limits which extend from PGBT to just south of Headquarters Drive (approximately 0.5 mile south of SRT). The project is primarily proposed within existing right-of-way (ROW), with the exception of the PGBT interchange improvements which would require 1.47 acres of ROW acquisition and 0.49 acre of extended utility easements between Plano Parkway and Park Boulevard. Existing and proposed ROW boundaries and utility easements are shown on the **Constraints Map**. The total area to be impacted by construction activities is 62.17 acres. The majority of vertical impacts would extend to a maximum depth of 5 feet below ground surface for the planned construction; however, vertical impacts would extend to a maximum depth of 27 feet below ground surface for the construction of a portion of one ramp between PGBT and Plano Parkway.

Environmental Setting

The proposed project site lies in an upland area within the Blackland Prairie Ecological Region of Texas (Gould 1975). Geology in the project area is mapped as Austin Chalk and dates to the

Cretaceous Period (Barnes 1974). The area has been disturbed by highway, road and drainage construction. According to the Soil Survey of Collin County, Texas (USDA 1969), the project site is primarily located within the Houston Black Series, which consists of deep, gently sloping calcareous, clayey soils in uplands. Refer to the **USGS Topographic Map** for this project.

Background and Previous Investigations

An archeological background literature and records search was performed to determine the locations of any previous surveys and recorded sites in or near the project area and to determine the need for additional archeological investigation. The background research included examination of records at the Texas Archeological Research Laboratory (TARL) and the Texas Historical Commission (THC), via the online Texas Historic Sites Atlas (Atlas). Site files, relevant maps, and the National Register of Historic Places (NRHP) listings were examined. Aerial photographs and soil survey maps were also examined.

To date, one archeological survey has been conducted within the project APE. According to the Atlas, the survey was conducted by Ecological Communications Corporation in 2008 for a TxDOT project along Windhaven Parkway. The survey identified no archeological resources. No archeological properties which would be eligible for listing in the NRHP or warrant designation as a State Archeological Landmark (SAL) have been identified within the APE, and no archeological sites are located within one kilometer of the APE. In addition, there are no standing structures within the APE.

Recommendations

There are no known archeological sites within or immediately adjacent to the APE. Based on the project's upland location within a geologic setting with minimal potential to contain buried archeological deposits, a lack of known archeological sites within or adjacent to the APE, and the disturbances both within and adjacent to the APE from previous roadway construction, there is little likelihood of significant or intact prehistoric or historical archeological sites within the APE nor is the geologic setting favorable for their occurrence or preservation. No archeological historic properties (36 CFR 800.16[l]) or SALs (13 TAC 26.12) occur within the APE and none would be affected by the proposed undertaking. As a result of the negative findings of the background research, it is recommended that no additional archeological investigations are warranted.

Bibliography

Barnes, V. 1974. *Geologic Atlas of Texas, Sherman Sheet*. Bureau of Economic Geology, The University of Texas at Austin.

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MRD/mrd

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SUPPORTING INFORMATION

Date: December 18, 2012

To: Lori Shelton

From: Julie Morse, Lupe Pettit

Project: DNT 4th Lane Expansion and DNT/PGBT Interchange Improvements

Re: Mobile Source Air Toxics

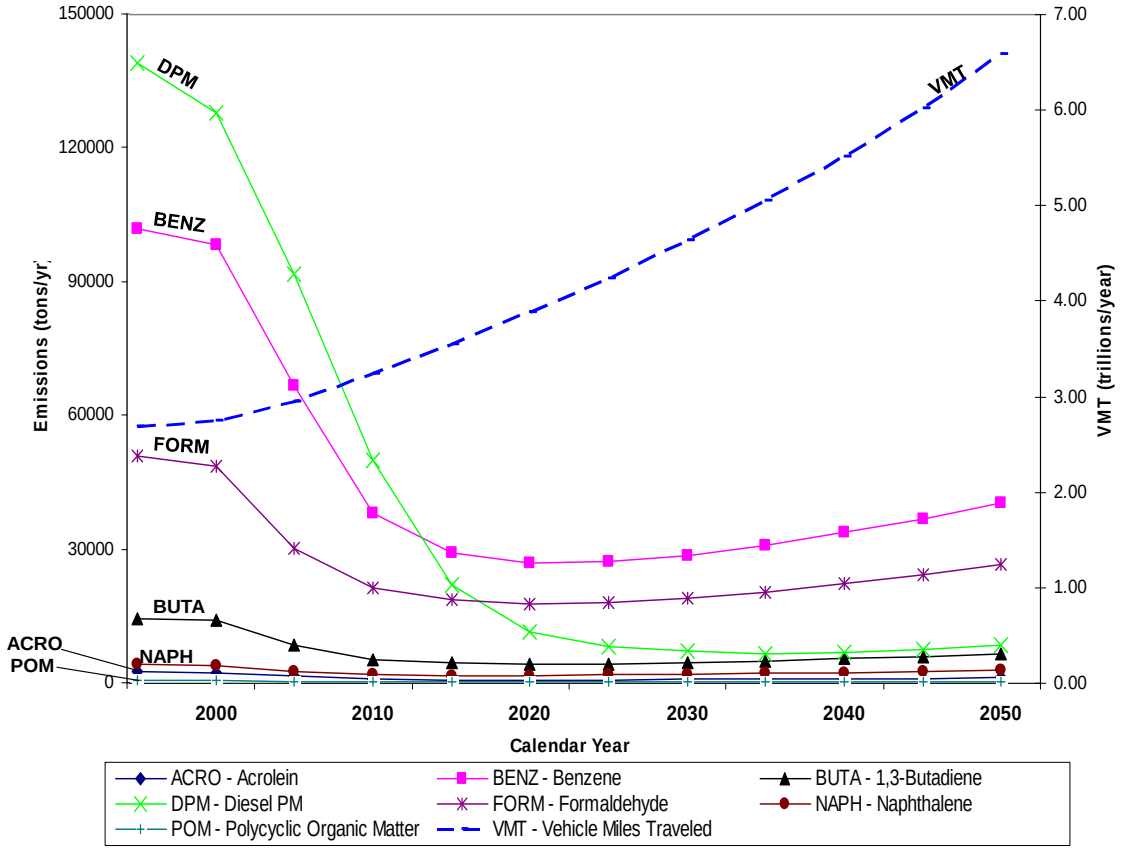
Although the project is not exempt under 40 Code of Federal Regulations (CFR) 93.126, is adding capacity, and has an average daily traffic (ADT) greater than 140,000 vehicles per day, it has no Federal Highway Administration (FHWA)/Federal Transit Administration involvement; therefore, a quantitative mobile source air toxics (MSAT) analysis is not required. However, the North Texas Tollway Authority (NTTA) has performed a qualitative analysis to disclose information that is unavailable and incomplete regarding MSAT. The following qualitative analysis does not include an air sensitive receptor assessment because the analysis was performed in accordance with the Texas Department of Transportation (TxDOT) 2006 *Air Quality Guidelines* (rev. 2011), which no longer require a sensitive receptor assessment.

Background

Controlling air toxic emissions became a national priority with the passage of the Clean Air Act (CAA) Amendments of 1990, whereby Congress mandated that the Environmental Protection Agency (EPA) regulate 188 air toxics, also known as hazardous air pollutants. The EPA has assessed this expansive list in their latest rule on the Control of Hazardous Air Pollutants from Mobile Sources (Federal Register, Vol. 72, No. 37, page 8430, February 26, 2007) and identified a group of 93 compounds emitted from mobile sources that are listed in their Integrated Risk Information System (IRIS) (http://www.epa.gov/ncea/iris/index.html). In addition, the EPA identified seven compounds with significant contributions from mobile sources that are among the national and regional-scale cancer risk drivers from their 1999 National Air Toxics Assessment (NATA) (http://www.epa.gov/ttn/atw/nata1999/). These are acrolein, benzene, 1,3-butadiene, diesel particulate matter plus diesel exhaust organic gases (DPM), formaldehyde, naphthalene, and polycyclic organic matter. While the FHWA considers these the priority MSAT, the list is subject to change and may be adjusted in consideration of future EPA rules.

The 2007 EPA MSAT rule mentioned above requires controls that will dramatically decrease MSAT emissions through cleaner fuels and cleaner engines. According to an FHWA analysis using EPA's MOBILE6.2 model, even if vehicle activity vehicle miles traveled (VMT) increases by 145% as assumed, a combined reduction of 72% in the total annual emission rate for the priority MSAT is projected from 1999 to 2050, as shown in **Figure 1** and **Table 1**.

Figure 1: National MSAT Emission Trends 1999-2050 for Vehicles Operating on Roadways Using the EPA's MOBILE6.2 Model



Source: ***Table 1*** *below.*

Notes: *(1) Annual emissions of polycyclic organic matter were projected to be 561 tons/year for 1999, decreasing to 373 tons/year for 2050.*

(2) Trends for specific locations may be different, depending on locally derived information representing vehicle-miles travelled, vehicle speeds, vehicle mix, fuels, emission control programs, meteorology, and other factors.

Table 1: National MSAT Emissions and Percent Reduction for 1999-2050 for Vehicles Operating on Roadways Using the EPA's MOBILE6.2 Model

Pollutant/VMT	Pollutant Emissions (tons) and VMT by Calendar Year							Reduction
	1999	2000	2010	2020	2030	2040	2050	1999 to 2050
Acrolein	2570	2430	1000	775	824	970	1160	-55%
Benzene	102000	98400	38000	27000	28700	33900	40500	-60%
1,3-Butadiene	14400	14100	5410	4360	4630	5460	6520	-55%
DPM	139000	128000	50000	11400	7080	7070	8440	-94%
Formaldehyde	50900	48800	21400	17800	19000	22400	26800	-47%
Naphthalene	4150	4030	1990	1780	2030	2400	2870	-31%
Polycyclic Organic Matter	561	541	259	233	265	313	373	-33%
Trillions VMT	2.69	2.75	3.24	3.88	4.63	5.51	6.58	145%

Source: U.S. Environmental Protection Agency. MOBILE6.2 Model run August 20, 2009.

Air toxics analysis is a continuing area of research. While much work has been done to assess the overall health risk of air toxics, many questions remain unanswered. In particular, the tools and techniques for assessing project-specific health outcomes as a result of lifetime MSAT exposure remain limited. These limitations impede the ability to evaluate how the potential health risks posed by MSAT exposure should be factored into project-level decision-making within the context of the National Environmental Policy Act (NEPA). The FHWA, EPA, Health Effects Institute (HEI), and others have funded and conducted research studies to try to more clearly define potential risks from MSAT emissions associated with highway projects. The FHWA will continue to monitor the developing research in this emerging field.

Project-Specific MSAT Information

A qualitative analysis provides a basis for identifying and comparing the potential differences among MSAT emissions, if any, from the various alternatives. The qualitative assessment presented below is derived in part from a study conducted by the FHWA entitled *A Methodology for Evaluating Mobile Source Air Toxic Emissions Among Transportation Project Alternatives*, found at:
http://www.fhwa.dot.gov/environment/air_quality/air_toxics/research_and_analysis/mobile_source_air_toxics/msatemissions.pdf.

For each alternative in this document, the amount of MSAT emitted would be proportional to the VMT, assuming that other variables such as fleet mix are the same for each alternative. The VMT estimated for the Build Alternative is slightly higher than that for the No-Build Alternative because the additional capacity increases the efficiency of the roadway and attracts rerouted trips from elsewhere in the transportation network. This increase in VMT would lead to higher MSAT emissions for the preferred action alternative along the highway corridor, along with a corresponding decrease in MSAT emissions along the parallel routes. The emissions increase is offset somewhat by lower MSAT emission rates due to increased speeds; according to the EPA's MOBILE6.2 emissions model, emissions of all of the priority MSAT except for DPM decrease as speed increases. The extent to which these speed-related emissions decreases would offset VMT-related emissions increases cannot be reliably projected due to the inherent deficiencies of technical models. Also, regardless of the alternative chosen, emissions will likely be lower than present levels in the design year as a result of the EPA's national control

programs that are projected to reduce annual MSAT emissions by 72% between 1999 and 2050. Local conditions may differ from these national projections in terms of fleet mix and turnover, VMT growth rates, and local control measures. However, the magnitude of the EPA-projected reductions is so great (even after accounting for VMT growth) that MSAT emissions in the study area are likely to be lower in the future in nearly all cases.

The additional travel lanes contemplated as part of the project alternatives will have the effect of moving some traffic closer to nearby homes, schools, and businesses; therefore, under each alternative there may be localized areas where ambient concentrations of MSAT could be higher under the Build Alternative than the No-Build Alternative. The localized increases in MSAT concentrations would likely be most pronounced along the entire project limits under the Build Alternative because two lanes would be added which would move travel lanes closer to populated areas. However, the magnitude and the duration of these potential increases compared to the No-Build Alternative cannot be reliably quantified due to incomplete or unavailable information in forecasting project-specific MSAT health impacts. In sum, when a highway is widened, the localized level of MSAT emissions for the Build Alternative could be higher relative to the No-Build Alternative, but this could be offset due to increases in speeds and reductions in congestion (which are associated with lower MSAT emissions). Also, MSAT will be lower in other locations when traffic shifts away from them. However, on a regional basis, the EPA's vehicle and fuel regulations, coupled with fleet turnover, will over time cause substantial reductions that, in almost all cases, will cause region-wide MSAT levels to be lower in the future.

Incomplete or Unavailable Information for Project-Specific MSAT Health Impacts Analysis
In the FHWA's view, information is incomplete or unavailable to credibly predict the project-specific health impacts due to changes in MSAT emissions associated with a proposed set of highway alternatives. The outcome of such an assessment, adverse or not, would be influenced more by the uncertainty introduced into the process through assumption and speculation rather than any genuine insight into the actual health impacts directly attributable to MSAT exposure associated with a proposed action.

The EPA is responsible for protecting the public health and welfare from any known or anticipated effect of an air pollutant. They are the lead authority for administering the CAA and its amendments and have specific statutory obligations with respect to hazardous air pollutants and MSAT. The EPA is in the continual process of assessing human health effects, exposures, and risks posed by air pollutants. They maintain IRIS, which is "a compilation of electronic reports on specific substances found in the environment and their potential to cause human health effects" (EPA, http://www.epa.gov/ncea/iris/index.html). Each report contains assessments of non-cancerous and cancerous effects for individual compounds and quantitative estimates of risk levels from lifetime oral and inhalation exposures with uncertainty spanning perhaps an order of magnitude.

Other organizations are also active in the research and analyses of the human health effects of MSAT, including the HEI. Two HEI studies are summarized in *Appendix D* of FHWA's 2009 *Interim Guidance Update on Mobile Source Air Toxic Analysis in NEPA Documents*, which can be found at the following address:
(http://www.fhwa.dot.gov/environment/air_quality/air_toxics/policy_and_guidance/100109guidmem.cfm). This appendix also discusses a variety of FHWA research initiatives related to air toxics. Among the adverse health effects linked to MSAT compounds at high exposures are cancer in humans in occupational settings; cancer in animals; and irritation to the respiratory tract, including the exacerbation of asthma. Less obvious is the adverse

human health effects of MSAT compounds at current environmental concentrations (HEI, http://pubs.healtheffects.org/view.php?id=282) or in the future as vehicle emissions substantially decrease (HEI, http://pubs.healtheffects.org/view.php?id=306).

The methodologies for forecasting health impacts include emissions modeling; dispersion modeling; exposure modeling; and then final determination of health impacts - each step in the process building on the model predictions obtained in the previous step. All are encumbered by technical shortcomings or uncertain science that prevents a more complete differentiation of the MSAT health impacts among a set of project alternatives. These difficulties are magnified for lifetime (i.e., 70 year) assessments, particularly because unsupportable assumptions would have to be made regarding changes in travel patterns and vehicle technology (which affects emissions rates) over that timeframe, since such information is unavailable. The results produced by the EPA's MOBILE6.2 model, the California EPA's Emfac2007 model, and the EPA's MOVES model in forecasting MSAT emissions are highly inconsistent. Indications from the development of the MOVES model are that MOBILE6.2 significantly underestimates DPM emissions and significantly overestimates benzene emissions.

Regarding air dispersion modeling, an extensive evaluation of the EPA's guideline CAL3QHC model was conducted in a National Cooperative Highway Research Program (NCHRP) study (http://www.epa.gov/scram001/dispersion_alt.htm#hyroad), which documents poor model performance at 10 sites across the country - 3 where intensive monitoring was conducted plus an additional 7 with less intensive monitoring. The study indicates a bias of the CAL3QHC model to overestimate concentrations near highly congested intersections and underestimate concentrations near uncongested intersections. The consequence of this is a tendency to overstate the air quality benefits of mitigating congestion at intersections. Such poor model performance is less difficult to manage for demonstrating compliance with the National Ambient Air Quality Standards for relatively short timeframes than it is for forecasting individual exposure over an entire lifetime, especially given that some information needed for estimating 70-year lifetime exposure is unavailable. It is particularly difficult to reliably forecast MSAT exposure near roadways and to determine the portion of time that people are actually exposed at a specific location.

There are considerable uncertainties associated with the existing estimates of toxicity of the various MSAT, because of factors such as low-dose extrapolation and translation of occupational exposure data to the general population, a concern expressed by HEI (http://pubs.healtheffects.org/view.php?id=282). As a result, there is no national consensus on air dose-response values assumed to protect the public health and welfare for MSAT compounds, and in particular for DPM. The EPA (http://www.epa.gov/risk/basicinformation.htm#g) and the HEI (http://wwwcf.fhwa.dot.gov/exit.cfm?link=http://pubs.healtheffects.org/getfile.php?u=395) have not established a basis for quantitative risk assessment of DPM in ambient settings.

There is also the lack of a national consensus on an acceptable level of risk. The current context is the process used by the EPA as provided by the CAA to determine whether more stringent controls are required in order to provide an ample margin of safety to protect public health or to prevent an adverse environmental effect for industrial sources subject to the maximum achievable control technology standards, such as benzene emissions from refineries. The decision framework is a two-step process. The first step requires the EPA to determine a "safe" or "acceptable" level of risk due to emissions from a source, which is generally no greater than approximately 100 in a million. Additional factors are considered in the second step, the goal of which is to maximize the number of people with risks less than 1 in a million due to emissions from a source. The results of this statutory two-step process do not guarantee that

cancer risks from exposure to air toxics are less than 1 in a million; in some cases, the residual risk determination could result in maximum individual cancer risks that are as high as approximately 100 in a million. In a June 2008 decision, the U.S. Court of Appeals for the District of Columbia Circuit upheld the EPA's approach to addressing risk in its two step decision framework. Information is incomplete or unavailable to establish that even the largest of highway projects would result in levels of risk greater than safe or acceptable.

Because of the limitations in the methodologies for forecasting health impacts described, any predicted difference in health impacts between alternatives is likely to be much smaller than the uncertainties associated with predicting the impacts. Consequently, the results of such assessments would not be useful to decision makers, who would need to weigh this information against project benefits, such as reducing traffic congestion, crash rates, and fatalities plus improved access for emergency response, that are better suited for quantitative analysis.

Conclusion

In this document, a qualitative MSAT assessment has been provided relative to the various alternatives of MSAT emissions and has acknowledged that the Build scenario may result in increased exposure to MSAT emissions in certain locations, although the concentrations and duration of exposures are uncertain, and because of this uncertainty, the health effects from these emissions cannot be estimated.

During the construction phase of this project, temporary increases in air pollutant emissions may occur from construction activities. The primary construction-related emissions are particulate matter (fugitive dust) from site preparation. These emissions are temporary in nature (only occurring during actual construction); it is not possible to reasonably estimate impacts from these emissions due to limitations of the existing models. However, the potential impacts of particulate matter emissions will be minimized by using fugitive dust control measures such as covering or treating disturbed areas with dust suppression techniques, sprinkling, covering loaded trucks, and other dust abatement controls, as appropriate.

Considering the temporary and transient nature of construction-related emissions, as well as the mitigation actions to be utilized, it is not anticipated that emissions from construction of this project will have any significant impact on air quality in the area.

MGP/mgp

NORTH TEXAS TOLLWAY AUTHORITY

5900 West Plano Parkway, Suite 100 ● Plano, Texas 75026 ● (214) 461-2000 ● Fax (214) 528-4826 ● www.ntta.org

SUPPORTING INFORMATION

Date: November 30, 2012

To: Lori Shelton

From: Julie Morse, Deborah Nixon

Project: DNT 4th Lane Expansion and DNT/PGBT Interchange Improvements

Re: Hazmat Initial Site Assessment

The information presented below summarizes the results of the Hazmat Initial Site Assessment performed in November 2012 for the proposed project.

Visual Survey

A visual survey of the proposed project area was conducted for evidence of hazardous substances and/or contamination on November 9, 2012. This survey included a visual observation of properties located along and immediately outside the proposed project limits to identify the release or threatened release of petroleum products or other hazardous substances. There were no obvious indications (such as spills, stains, or leaks) of environmental impacts along or within the project limits associated with this site or any other adjacent facilities.

Regulatory Records Review

A review of regulatory databases was conducted for the project area to determine if any known sites producing, storing, and/or disposing of toxic or hazardous materials might affect the proposed project. These databases were obtained directly from government sources and are updated on approximately quarterly intervals. This assessment was conducted in accordance with the American Society for Testing and Materials (ASTM) Practice E1528-06 (Transaction Screen Process), with exceptions to accommodate the particular situations and needs of NTTA construction projects. The regulatory database report (**GeoSearch Radius Report**) dated October 29, 2012 is attached.

The ASTM radius search of the proposed project area identified and located 76 sites. The sites identified consisted of 3 Facility Registry System (FRS) sites, 5 Resource Conservation and Recovery Act Generator (RCRAG) sites, 1 No Longer Regulated RCRA Generator Facilities (NLRRCRAG) site, 6 Dry Cleaner Registration (DCR) sites, 6 Industrial and Hazardous Waste (IHW) sites, 17 Petroleum Storage Tank (PST) sites, 1 Affected Property Assessment Reports (APAR) sites, 5 Leaking Petroleum Storage Tank (LPST) sites, 29 Tier II Chemical Reporting Program sites, and 3 Voluntary Cleanup Program (VCP) sites.

Sites considered likely to be contaminated and within or adjacent to the proposed project limits are categorized as “high risk.” Examples of “high risk” sites include landfills and leaking underground storage tank sites. Based on distance, topographic gradient, historical information, and database information, no high risk sites were identified within or adjacent to the proposed project limits.

Sites are categorized as “low risk” if available information indicates that some potential for contamination exists, but the site is not likely to pose a contamination problem to project construction. There are ten sites categorized as low risk. The low risk sites are summarized in

Table 1 and identified on the **Constraints Map**. The site numbers in **Table 1** correspond to the site numbers from the October 2012 GeoSearch Radius Report.

Table 1: Low Risk Hazmat Sites

Site No.	Site Name/Site Information	Database Listing	Regulatory Status	Gradient and Anticipated Property Impact
5	Kroger Fuel Facility 3305 Dallas Pkwy, Plano, TX 75093	PST	PST (Facility ID# 0083963) – Two gasoline storage tanks in use. One 20,000 gallon tank and one 18,000 gallon tank.	The site is adjacent to and at-grade with the proposed project. No additional ROW would be required at this property.
6	Tetco/Chevron 6001 W. Parker Rd, Plano, TX 75023	LPST and PST	LPST (ID# 116158) – No groundwater impacted, no apparent threats or impacts to receptors. Final concurrence issued, case closed. PST (Facility ID# 0069858) – Two underground gasoline storage tanks in use. One 20,000 gallon tank and one 15,000 gallon tank.	The site is adjacent to and at-grade with the proposed project. No additional ROW would be required at this property.
7	Chevron 1925 Dallas Pkwy, Plano, TX 75093	LPST, PST, VCP, and IHW	LPST (ID# 107486) – Groundwater impacted, no apparent threats or impacts to receptors. Final concurrence issued, case closed. PST (Facility ID# 0064531) – Three 11,627 gallon underground gasoline storage tanks removed from ground 1/11/2007. VCP (Facility ID# 1981) – 2006 application date. Investigation phase. Groundwater impacted with VOCs and TPH. IHW (TCEQ ID# 79245) – Small quantity generator. Inactive.	The site is adjacent to and at-grade with the proposed project. No additional ROW would be required at this property.
8	QS 328 5960 Dallas Pkwy, Plano, TX 75093	PST	PST (Facility ID# 0074594) – Two underground gasoline storage tanks in use. One 20,000 gallon tank and one 15,000 gallon tank	The site is adjacent to and at-grade with the proposed project. No additional ROW would be required at this property.
9	Exxon/7-Eleven 5940 W. Park Blvd, Plano, TX 75074	LPST, PST, and IHW	LPST (ID# 101805) – Groundwater impacted, no apparent threats or impacts to receptors. Final concurrence issued, case closed. PST (Facility ID# 0046590) – Three underground gasoline storage tanks removed from ground 12/8/1992. Three 12,000 gallon gasoline underground storage tanks in use. IHW (TCEQ ID# 77366) – Conditionally exempt small quantity generator. Inactive.	The site is adjacent to and at-grade with the proposed project. No additional ROW would be required at this property.
11	Texaco/Shell 2000 Dallas Pkwy, Plano, TX 75093	PST, RCRAGR	RCRAGR (ID# 995431) – Large quantity generator and conditionally exempt small quantity generator. No violations reported. PST (Facility ID# 0064991) – Three underground gasoline storage tanks in use. Two 10,000 gallon tanks and one 12,000 gallon tank.	The site is adjacent to and at-grade with the proposed project. No additional ROW would be required at this property.

Site No.	Site Name/Site Information	Database Listing	Regulatory Status	Gradient and Anticipated Property Impact
12	7-Eleven 6000 W. Plano Pkwy, Plano, TX 75093	PST	PST (Facility ID# 0079762) – Two underground gasoline storage tanks in use. One 10,000 gallon tank and one 15,000 gallon tank.	The site is adjacent to and at-grade with the proposed project. No additional ROW would be required at this property.
13	Shell 5940 W. Plano Pkwy, Plano, TX 75093	LPST and PST	LPST (ID# 116546) – Groundwater impacted, no apparent threats or impacts to receptors. Final concurrence issued, case closed. PST (Facility ID# 0059582) – Three 12,000 gallon underground gasoline storage tanks reported in use. However, these tanks were removed from the ground in September 2012.	The site is adjacent to and at-grade with the proposed project. No additional ROW would be required at this property.
16	WalMart Supercenter 1700 Dallas Pkwy, Plano, TX 75093	PST, RCRAGR and IHW	PST (Facility ID# 0077706) – One 1,000 gallon underground storage tank in use. Substance not reported. RCRAGR (ID# 68254) – Small quantity generator. No violations reported. IHW (TCEQ ID# 88710) – Small quantity generator. Active.	The site is adjacent to and at-grade with the proposed project. No additional ROW would be required at this property.
18	Costco 1701 Dallas Pkwy, Plano, TX 75093	TIER II, RCRAGR and PST	TIER II (ID# multiple) – Facility passed all validation checks. RCRAGR (ID# 68254) – Large, small, and conditionally exempt small quantity generator. No violations reported. PST (Facility ID# 0077706) – Three 20,000 gallon gasoline underground storage tanks in use.	The site is adjacent to and at-grade with the proposed project. No additional ROW would be required at this property.

Four of the low risk sites (Site Nos. 6, 7, 9, and 13) have a reported LPST. All are at-grade with respect to the proposed improvements and have received final concurrence ("case closed" status). No portion of the LPST sites would be acquired.

Any unanticipated hazardous materials encountered during construction would be handled according to applicable federal, state, and local regulations per NTTA Standard Specifications. The contractor would take appropriate measures to prevent, minimize, and control the spill of hazardous materials in the construction staging area. The use of construction equipment within sensitive areas would be minimized or eliminated entirely. All construction materials used for the proposed project would be removed as soon as work schedules permit.

DN/dn

Attachment:
GeoSearch Radius Report

GeoSearch
On time. On target. In touch.

Radius Report

http://www.geo-search.net/QuickMap/index.htm?DataID=Standard0000048881
Click on link above to access the map and satellite view of current property

Target Property:
DNT 4th Lane
Collin County, Texas 75093

Prepared For:
HNTB-Plano

Order #: 20964
Job #: 48881
Date: 10/29/2012

3006 Bee Caves Rd, Suite A-230 · Austin, Texas 78746 · phone: 888-396-0042 · fax: 512-472-9967 · www.geo-search.net

TARGET PROPERTY SUMMARY

DNT 4th Lane
Collin County, Texas 75093

USGS Quadrangle: ***Hebron, TX***
Target Property Geometry: ***Corridor***

Target Property Longitude(s)/Latitude(s):
(-96.829224, 33.012705), (-96.829146, 33.016842), (-96.829156, 33.017646), (-96.829156, 33.018314), (-96.829195, 33.018930), (-96.829259, 33.019546), (-96.829361, 33.020141), (-96.829690, 33.022055), (-96.829758, 33.022396), (-96.829789, 33.022768), (-96.829813, 33.023511), (-96.829819, 33.025187), (-96.829763, 33.025515), (-96.829654, 33.025928), (-96.829290, 33.027853), (-96.829254, 33.028426), (-96.829191, 33.031767), (-96.829187, 33.031977), (-96.829182, 33.032264), (-96.829632, 33.036460), (-96.829638, 33.036768), (-96.829656, 33.037224), (-96.829643, 33.037892), (-96.829648, 33.044945), (-96.829639, 33.048068), (-96.829647, 33.048334), (-96.829666, 33.048642), (-96.829721, 33.049099), (-96.829857, 33.050543), (-96.829878, 33.050798), (-96.829884, 33.051095), (-96.829873, 33.052379), (-96.829853, 33.055466), (-96.829834, 33.055795), (-96.829789, 33.056134), (-96.829705, 33.056578), (-96.829597, 33.056990), (-96.829463, 33.057413), (-96.829251, 33.057962), (-96.829055, 33.058341), (-96.828847, 33.058699), (-96.828560, 33.059172), (-96.828121, 33.059740), (-96.827513, 33.060580), (-96.825535, 33.063273), (-96.825300, 33.063684), (-96.825077, 33.064190), (-96.824891, 33.064676), (-96.824743, 33.065162), (-96.824633, 33.065659), (-96.824575, 33.066040), (-96.824543, 33.066411), (-96.824503, 33.074503), (-96.824466, 33.081110), (-96.824473, 33.082069), (-96.824428, 33.082472), (-96.824368, 33.082927), (-96.824287, 33.083276), (-96.824177, 33.083742), (-96.823108, 33.086931), (-96.823039, 33.087248), (-96.822966, 33.087778), (-96.822909, 33.088142), (-96.822890, 33.088450), (-96.822903, 33.091081)

County/Parish Covered:
Collin (TX), Denton (TX)

Zipcode(s) Covered:
Carrollton TX: 75007, 75010
Dallas TX: 75252, 75287
Frisco TX: 75034
Plano TX: 75024, 75093
The Colony TX: 75056

State(s) Covered:
TX

****Target property is located in Radon Zone 3.***
Zone 3 areas have a predicted average indoor radon screening level less than 2 pCi/L (picocuries per liter).

TARGET PROPERTY SUMMARY

DATABASE FINDINGS SUMMARY

DATABASE	ACRONYM	LOCA-TABLE	UNLOCA-TABLE	SEARCH RADIUS (miles)
FEDERAL				
AEROMETRIC INFORMATION RETRIEVAL SYSTEM / AIR FACILITY SUBSYSTEM	AIRSAFS	0	0	Target Property
BIENNIAL REPORTING SYSTEM	BRS	0	0	Target Property
CLANDESTINE DRUG LABORATORY LOCATIONS	CDL	0	0	Target Property
EPA DOCKET DATA	DOCKETS	0	0	Target Property
FEDERAL ENGINEERING INSTITUTIONAL CONTROL SITES	EC	0	0	Target Property
EMERGENCY RESPONSE NOTIFICATION SYSTEM	ERNSTX	0	0	Target Property
FACILITY REGISTRY SYSTEM	FRSTX	3	0	Target Property
HAZARDOUS MATERIALS INCIDENT REPORTING SYSTEM	HMIRSR06	0	0	Target Property
INTEGRATED COMPLIANCE INFORMATION SYSTEM (FORMERLY DOCKETS)	ICIS	0	0	Target Property
INTEGRATED COMPLIANCE INFORMATION SYSTEM NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM	ICISNPDES	0	0	Target Property
MATERIAL LICENSING TRACKING SYSTEM	MLTS	0	0	Target Property
NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM	NPDESR06	0	0	Target Property
PCB ACTIVITY DATABASE SYSTEM	PADS	0	0	Target Property
PERMIT COMPLIANCE SYSTEM	PCSR06	0	0	Target Property
RCRA SITES WITH CONTROLS	RCRASC	0	0	Target Property
CERCLIS LIENS	SFLIENS	0	0	Target Property
SECTION SEVEN TRACKING SYSTEM	SSTS	0	0	Target Property
TOXICS RELEASE INVENTORY	TRI	0	0	Target Property
TOXIC SUBSTANCE CONTROL ACT INVENTORY	TSCA	0	0	Target Property
NO LONGER REGULATED RCRA GENERATOR FACILITIES	NLRRCRAG	1	0	Target Property and Adjoining
RESOURCE CONSERVATION & RECOVERY ACT - GENERATOR FACILITIES	RCRAGR06	5	0	Target Property and Adjoining
HISTORICAL GAS STATIONS	HISTPST	0	0	0.2500
BROWNFIELDS MANAGEMENT SYSTEM	BF	0	0	0.5000
COMPREHENSIVE ENVIRONMENTAL RESPONSE, COMPENSATION & LIABILITY INFORMATION SYSTEM	CERCLIS	0	0	0.5000

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DATABASE FINDINGS SUMMARY

DATABASE	ACRONYM	LOCA-TABLE	UNLOCA-TABLE	SEARCH RADIUS (miles)
LAND USE CONTROL INFORMATION SYSTEM	LUCIS	0	0	0.5000
NO FURTHER REMEDIAL ACTION PLANNED SITES	NFRAP	0	0	0.5000
NO LONGER REGULATED RCRA NON-CORRACTS TSD FACILITIES	NLRRCRAT	0	0	0.5000
OPEN DUMP INVENTORY	ODI	0	0	0.5000
RESOURCE CONSERVATION & RECOVERY ACT - TREATMENT, STORAGE & DISPOSAL FACILITIES	RCRAT	0	0	0.5000
DELISTED NATIONAL PRIORITIES LIST	DNPL	0	0	1.0000
DEPARTMENT OF DEFENSE SITES	DOD	0	0	1.0000
FORMERLY USED DEFENSE SITES	FUDS	0	0	1.0000
NO LONGER REGULATED RCRA CORRECTIVE ACTION FACILITIES	NLRRCRAC	0	0	1.0000
NATIONAL PRIORITIES LIST	NPL	0	0	1.0000
PROPOSED NATIONAL PRIORITIES LIST	PNPL	0	0	1.0000
RESOURCE CONSERVATION & RECOVERY ACT - CORRECTIVE ACTION FACILITIES	RCRAC	0	0	1.0000
RECORD OF DECISION SYSTEM	RODS	0	0	1.0000
SUB-TOTAL		**9**	**0**	
STATE (TX)				
GROUNDWATER CONTAMINATION CASES	GWCC	0	0	Target Property
HISTORIC GROUNDWATER CONTAMINATION CASES	HISTGWCC	0	0	Target Property
TCEQ LIENS	LIENS	0	0	Target Property
MUNICIPAL SETTING DESIGNATIONS	MSD	0	0	Target Property
NOTICE OF VIOLATIONS	NOV	0	0	Target Property
STATE INSTITUTIONAL/ENGINEERING CONTROL SITES	SIEC01	0	0	Target Property
SPILLS LISTING	SPILLS	0	0	Target Property
DRY CLEANER REGISTRATION DATABASE	DCR	6	0	0.2500
INDUSTRIAL AND HAZARDOUS WASTE SITES	IHW	6	0	0.2500
PERMITTED INDUSTRIAL HAZARDOUS WASTE SITES	PIHW	0	0	0.2500

DATABASE FINDINGS SUMMARY

DATABASE	ACRONYM	LOCA-TABLE	UNLOCA-TABLE	SEARCH RADIUS (miles)
PETROLEUM STORAGE TANKS	PST	17	0	0.2500
AFFECTED PROPERTY ASSESSMENT REPORTS	APAR	1	0	0.5000
BROWNFIELDS SITE ASSESSMENTS	BSA	0	0	0.5000
CLOSED & ABANDONED LANDFILL INVENTORY	CALF	0	0	0.5000
INNOCENT OWNER / OPERATOR DATABASE	IOP	0	0	0.5000
LEAKING PETROLEUM STORAGE TANKS	LPST	5	0	0.5000
MUNICIPAL SOLID WASTE LANDFILL SITES	MSWLF	0	0	0.5000
RAILROAD COMMISSION VCP AND BROWNFIELD SITES	RRCVCP	0	0	0.5000
RADIOACTIVE WASTE SITES	RWS	0	0	0.5000
TIER I I CHEMICAL REPORTING PROGRAM FACILITIES	TIERII	29	0	0.5000
VOLUNTARY CLEANUP PROGRAM SITES	VCP	3	0	0.5000
RECYCLING FACILITIES	WMRF	0	0	0.5000
STATE SUPERFUND SITES	SF	0	0	1.0000
SUB-TOTAL		**67**	**0**	
TRIBAL				
UNDERGROUND STORAGE TANKS ON TRIBAL LANDS	USTR06	0	0	0.2500
LEAKING UNDERGROUND STORAGE TANKS ON TRIBAL LANDS	LUSTR06	0	0	0.5000
OPEN DUMP INVENTORY ON TRIBAL LANDS	ODINDIAN	0	0	0.5000
INDIAN RESERVATIONS	INDIANRES	0	0	1.0000
SUB-TOTAL		**0**	**0**	
TOTAL		**76**	**0**	

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LOCATABLE DATABASE FINDINGS

ACRONYM	Target Property	SEARCH RADIUS (miles)	1/8 Mile (> TP)	1/4 Mile (> 1/8)	1/2 Mile (> 1/4)	1 Mile (> 1/2)	> 1 Mile	Total
FEDERAL								
AIRSAFS		.0200	0	0	0	0	NS	0
BRS		.0200	0	0	0	0	NS	0
CDL		.0200	0	0	0	0	NS	0
DOCKETS		.0200	0	0	0	0	NS	0
EC		.0200	0	0	0	0	NS	0
ERNSTX		.0200	0	0	0	0	NS	0
FRSTX	3	.0200	0	0	0	0	NS	3
HMIRSR06		.0200	0	0	0	0	NS	0
ICIS		.0200	0	0	0	0	NS	0
ICISNPDES		.0200	0	0	0	0	NS	0
MLTS		.0200	0	0	0	0	NS	0
NPDESR06		.0200	0	0	0	0	NS	0
PADS		.0200	0	0	0	0	NS	0
PCSR06		.0200	0	0	0	0	NS	0
RCRASC		.0200	0	0	0	0	NS	0
SFLIENS		.0200	0	0	0	0	NS	0
SSTS		.0200	0	0	0	0	NS	0
TRI		.0200	0	0	0	0	NS	0
TSCA		.0200	0	0	0	0	NS	0
NLRRCRAG		.1250	1	0	0	0	NS	1
RCRAGR06		.1250	4	1	0	0	NS	5
HISTPST		.2500	0	0	0	0	NS	0
BF		.5000	0	0	0	0	NS	0
CERCLIS		.5000	0	0	0	0	NS	0
LUCIS		.5000	0	0	0	0	NS	0
NFRAP		.5000	0	0	0	0	NS	0
NLRRCRAT		.5000	0	0	0	0	NS	0

LOCATABLE DATABASE FINDINGS

ACRONYM	Target Property	SEARCH RADIUS (miles)	1/8 Mile (> TP)	1/4 Mile (> 1/8)	1/2 Mile (> 1/4)	1 Mile (> 1/2)	> 1 Mile	Total
ODI		.5000	0	0	0	0	NS	0
RCRAT		.5000	0	0	0	0	NS	0
DNPL		1.000	0	0	0	0	NS	0
DOD		1.000	0	0	0	0	NS	0
FUDS		1.000	0	0	0	0	NS	0
NLRRCRAC		1.000	0	0	0	0	NS	0
NPL		1.000	0	0	0	0	NS	0
PNPL		1.000	0	0	0	0	NS	0
RCRAC		1.000	0	0	0	0	NS	0
RODS		1.000	0	0	0	0	NS	0
SUB-TOTAL	**3**		**5**	**1**	**0**	**0**	**0**	**9**
STATE (TX)								
GWCC		.0200	0	0	0	0	NS	0
HISTGWCC		.0200	0	0	0	0	NS	0
LIENS		.0200	0	0	0	0	NS	0
MSD		.0200	0	0	0	0	NS	0
NOV		.0200	0	0	0	0	NS	0
SIEC01		.0200	0	0	0	0	NS	0
SPILLS		.0200	0	0	0	0	NS	0
DCR		.2500	4	2	0	0	NS	6
IHW		.2500	4	2	0	0	NS	6
PIHW		.2500	0	0	0	0	NS	0
PST		.2500	13	4	0	0	NS	17
APAR		.5000	0	0	1	0	NS	1
BSA		.5000	0	0	0	0	NS	0
CALF		.5000	0	0	0	0	NS	0
IOP		.5000	0	0	0	0	NS	0

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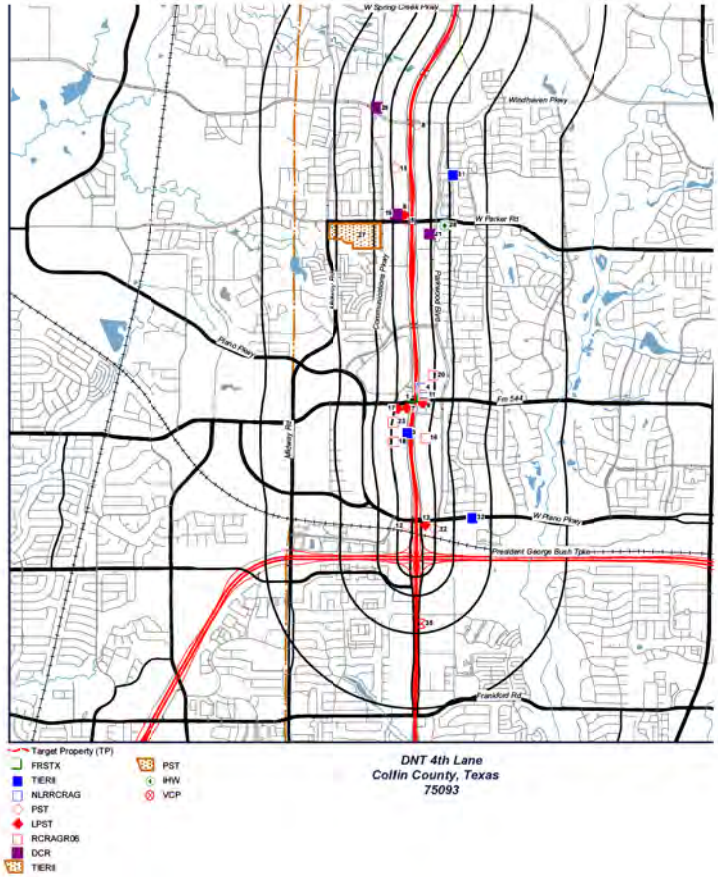
LOCATABLE DATABASE FINDINGS

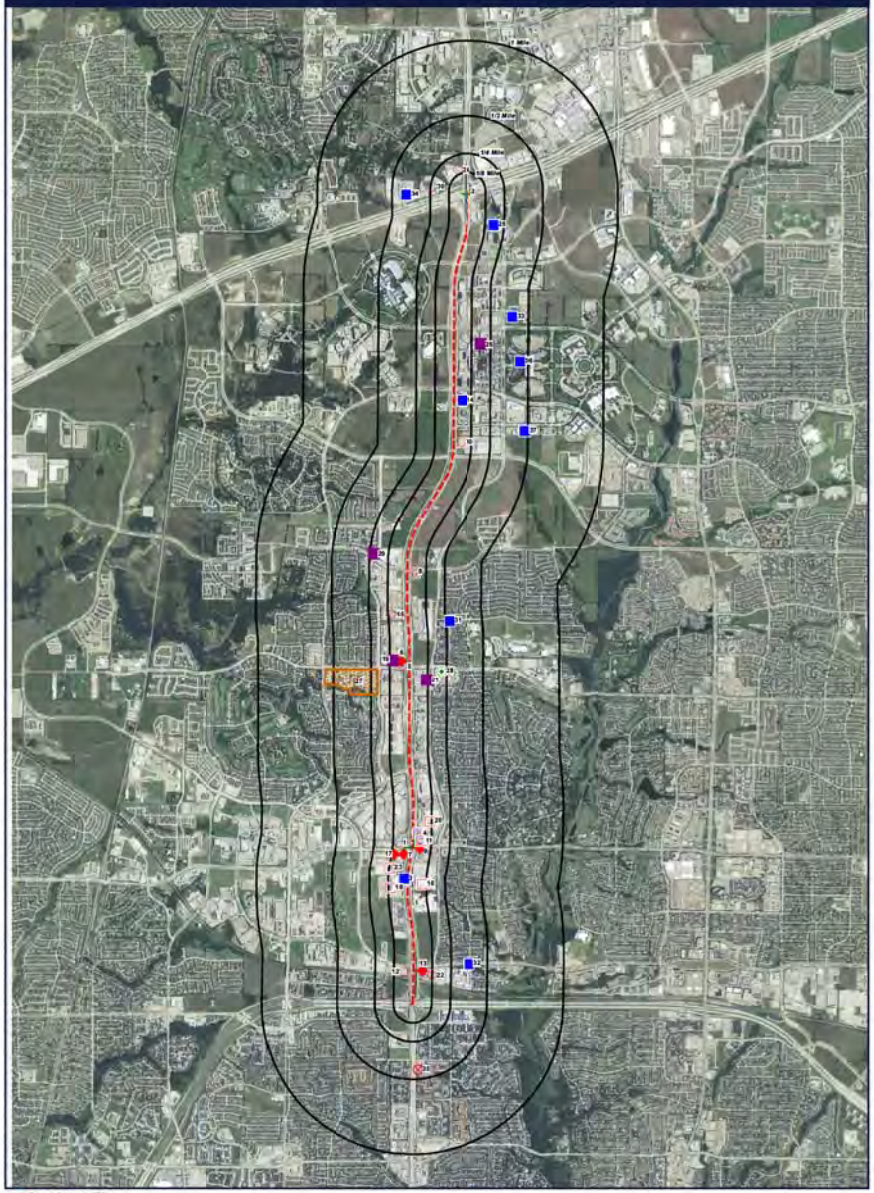
ACRONYM	Target Property	SEARCH RADIUS (miles)	1/8 Mile (> TP)	1/4 Mile (> 1/8)	1/2 Mile (> 1/4)	1 Mile (> 1/2)	> 1 Mile	Total
LPST		.5000	5	0	0	0	NS	5
MSWLF		.5000	0	0	0	0	NS	0
RRCVCP		.5000	0	0	0	0	NS	0
RWS		.5000	0	0	0	0	NS	0
TIERII	1	.5000	6	12	10	0	NS	29
VCP		.5000	2	0	1	0	NS	3
WMRF		.5000	0	0	0	0	NS	0
SF		1.000	0	0	0	0	NS	0
SUB-TOTAL	**1**		**34**	**20**	**12**	**0**	**0**	**67**
TRIBAL								
USTR06		.2500	0	0	0	0	NS	0
LUSTR06		.5000	0	0	0	0	NS	0
ODINDIAN		.5000	0	0	0	0	NS	0
INDIANRES		1.000	0	0	0	0	NS	0
SUB-TOTAL			**0**	**0**	**0**	**0**	**0**	**0**
TOTAL	**4**		**39**	**21**	**12**	**0**	**0**	**76**

NOTES:
NS = NO SEARCH REQUESTED BY CUSTOMER



DNT 4th Lane
Collin County, Texas
75093

ORTHOPHOTO MAP



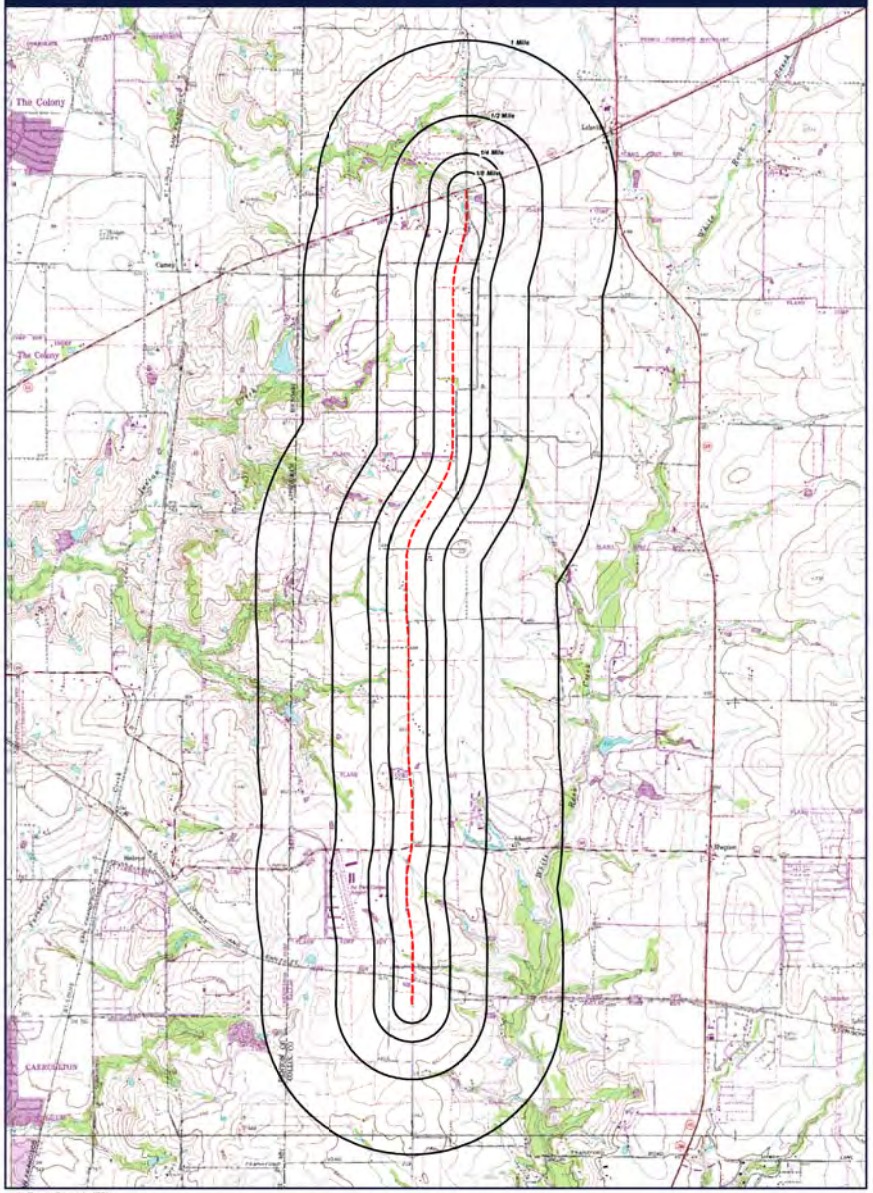
Target Property (TP)
FRSTX
TIERII
NLRRCRAG
PST
LPST
RCRAGR06
DCR
TIERII
PST
tHW
VCP

Quadrangle(s): Hebron
Source: USDA (2010)
DNT 4th Lane
Collin County, Texas
75093

N
W E
S

0' 1600' 3200' 4800'
SCALE: 1" = 3200'

TOPOGRAPHIC MAP



Target Property (TP)

Quadrangle(s): Hebron
Source: USGS, 1981
DNT 4th Lane
Collin County, Texas
75093

N
W E
S

0' 1600' 3200' 4800'
SCALE: 1" = 3200'

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JOB #: 48881 - 10/29/2012

REPORT SUMMARY OF LOCATABLE SITES

MAP ID#	DATABASE NAME	SITE ID#	DISTANCE FROM SITE	SITE NAME	ADDRESS	CITY, ZIP CODE	PAGE #
1	FRSTX	110035333341	0.010 W	TISEO PLANO PKWY TOLLWAY TO PARK BLVD &	ON PLANO PKWY FORM THE DALLAS NORTH	PLANO, 75093	1
1	FRSTX	110035200760	0.010 W	TISEO PAVING PLANO PARKWAY TOLLWAY TO PA	ON PLANO PKWY FROM DALLAS NORTH TOL	PLANO, 75093	2
2	FRSTX	110041315341	0.010 N	WILLIAMS BROTHERS SAM RAYBURN TOLLWAY NT	HIGHWAY INTERCHANGE OF SH 121 (SAM	PLANO, 75093	3
3	TIERII	FAWS0143159	0.020 W	PARK TOLLWAY	1907 DALLAS NORTH TOLLWAY	PLANO, 75093	4
4	IHW	87706	0.040 E	PORTRAIT INNOVATIONS	2108 DALLAS PKWY, STE 216A	PLANO, 75093	5
4	NLRRCRAG	TXR000063982	0.040 E	PORTRAIT INNOVATIONS INC	2108 DALLAS PKWY STE 216A	PLANO, 75093	6
4	DCR	RN104102231	0.050 SE	PARKWOOD CLEANERS	2100 DALLAS PKWY STE 112	PLANO, 75093	8
5	PST	0083963	0.040 W	KROGER FUEL FACILITY 540	3305 DALLAS PKWY	PLANO, 75093	9
5	DCR	RN106221435	0.040 SW	MEREDITH CLEANERS	6009 W PARKER RD STE 139	PLANO, 75093	12
6	PST	0069858	0.060 SW	TETCO 652	6001 W PARKER RD	PLANO, 75023	13
6	LPST	116158	0.060 SW	CHEVRON 60206732	6001 W PARKER RD	PLANO, 75023	16
7	LPST	107486	0.050 W	CHEVRON 60200455	1925 DALLAS PKWY	PLANO, 75093	17
7	PST	0064531	0.050 W	PARK CHEVRON	1925 DALLAS PKWY	PLANO, 75093	18
7	VCP	1981	0.050 W	CHEVRON FACILITY NO. 60200455	1925 NORTH DALLAS PARKWAY	PLANO	22
7	IHW	79245	0.050 W	CHEVRON FAC 200455	1925 DALLAS PKWY	PLANO, 75093	23
8	PST	0074594	0.050 SE	QS 328	5960 DALLAS PKWY	PLANO, 75093	24
9	LPST	101805	0.060 SE	EXXON 60084	5940 W PARK	PLANO, 75074	27
9	PST	0046590	0.060 SE	7-ELEVEN 35380	5940 W PARK BLVD	PLANO, 75093	28
9	IHW	77366	0.060 SE	EXXON RS 60084	5940 W PARK	PLANO, 75093	34
10	PST	0078468	0.060 E	CLASSIC BMW	6800 DALLAS PKWY	PLANO, 75024	35
11	RCRAGR06	TX0000995431	0.060 E	TEXACO STATION	2000 DALLAS PRKWY	PLANO, 75093	36
11	PST	0064991	0.060 E	SHELL PTC	2000 DALLAS PKWY	PLANO, 75093	37
12	PST	0079762	0.070 SW	7-ELEVEN 34171	6000 W PLANO PKWY	PLANO, 75093	41
13	PST	0059582	0.070 SE	SHELL ON PLANO PARKWAY	5940 W PLANO PKWY	PLANO, 75093	44
13	LPST	116546	0.070 SE	SHELL STATION	5940 W PLANO PKWY	PLANO, 75093	48
14	TIERII	8EUAJE002BDU	0.070 SE	GE HEALTHCARE IITS USA CORPORATION	6860 N. DALLAS PARKWAY SUITE 700	PLANO, 75024	49

REPORT SUMMARY OF LOCATABLE SITES

MAP ID#	DATABASE NAME	SITE ID#	DISTANCE FROM SITE	SITE NAME	ADDRESS	CITY, ZIP CODE	PAGE #
15	PST	0079729	0.100 W	CAPITAL ONE AUTO FINANCE	3901 DALLAS PKWY	PLANO, 75093	50
16	PST	0077706	0.100 E	WALMART SUPERCENTER 2086	1700 DALLAS PKWY	PLANO, 75093	51
16	RCRAGR06	TXR000068254	0.100 E	WAL-MART SUPERCENTER 2086	1700 DALLAS PKWY	PLANO, 750934519	53
16	IHW	88710	0.100 E	WAL-MART SUPERCENTER 2086	1700 DALLAS PKWY	PLANO, 75093	56
17	PST	0046708	0.110 W	ONE STOP 44	6100 W PARK BLVD	PLANO, 75093	59
17	VCP	2346	0.110 W	FORMER ONE STOP FOOD STORE 44	6100 W PARK BLVD	PLANO	64
17	LPST	106698	0.110 W	ONE STOP STORE 44	6100 W PARK	PLANO, 75093	65
18	TIERII	CC304805D1D0	0.110 W	COSTCO WHOLESALE (684)	1701 DALLAS PARKWAY	PLANO, 75093	66
18	TIERII	57C5DD3D5AEE	0.110 W	COSTCO WHOLESALE (684)	1701 DALLAS PARKWAY	PLANO, 75093	67
18	TIERII	48ZDV400FL6G	0.110 W	COSTCO # 684	1701 DALLAS PARKWAY	PLANO, 75093	68
18	TIERII	1259B1AB4F93	0.110 W	COSTCO WHOLESALE (684)	1701 DALLAS PARKWAY	PLANO, 75093	69
18	TIERII	B7D85E6C787F	0.110 W	COSTCO WHOLESALE (684)	1701 DALLAS PARKWAY	PLANO, 75093	70
18	RCRAGR06	TXR000042226	0.110 W	COSTCO WHOLESALE NO 684	1701 DALLAS PKWY	PLANO, 75093	71
18	PST	0074553	0.110 W	COSTCO WHOLESALE 684	1701 DALLAS PKWY	PLANO, 75093	73
19	DCR	RN103957551	0.110 W	MEREDITH CLEANERS	6009 W PARKER RD STE 157	PLANO, 75093	77
20	RCRAGR06	TXR000067058	0.120 E	TARGET CORPORATION	2200 DALLAS PKWY	PLANO, 75093	78
21	DCR	RN103963260	0.120 E	STANLEY CLEANERS	5960 W PARKER RD STE 280	PLANO, 75093	82
22	PST	0085153	0.130 E	BOARDWALK AUTO GROUP	5930 W PLANO PKWY	PLANO, 75093	83
23	TIERII	5D7898D4F366	0.130 W	THE HOME DEPOT STORE 0551	6200 W PARK BLVD	PLANO, 75093	84
23	TIERII	6ZWJMC06A0N2	0.130 W	THE HOME DEPOT STORE #0551	6200 W PARK BLVD	PLANO, 75093	85
23	TIERII	0AA7FADB559D	0.130 W	THE HOME DEPOT #0551	6200 WEST PARK BOULEVARD	PLANO, 75093	86
23	TIERII	4WHRX90C2274	0.130 W	HOME DEPOT #551	6200 WEST PARK ROAD	W. PLANO, 75093	87
23	RCRAGR06	TXR000060418	0.130 W	HOME DEPOT USA HD0551	6200 W PARK BLVD	PLANO, 750936204	88
23	IHW	87534	0.130 W	HOME DEPOT USA HD0551	6200 W PARK BLVD	PLANO, 75093	92
24	PST	0076658	0.160 NW	MCDAVID HONDA OF FRISCO	1601 N DALLAS PKWY	FRISCO, 75034	105

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REPORT SUMMARY OF LOCATABLE SITES

MAP ID#	DATABASE NAME	SITE ID#	DISTANCE FROM SITE	SITE NAME	ADDRESS	CITY, ZIP CODE	PAGE #
25	TIERII	969357	0.190 E	GRANITE_PARK	5800 GRANITE PARKWAY, GRANITE PARK	PLANO, 75024	106
26	DCR	RN104066055	0.190 E	LEGACY DRY CLEANERS	7200 BISHOP RD STE D2	PLANO, 75024	107
27	TIERII	72REAH00EA0Y	0.210 W	TEXAS HEALTH PLANO	6200 WEST PARKER ROAD	PLANO, 75093	108
27	TIERII	48QP8S00F7VV	0.210 W	TEXAS HEALTH RESOURCES REAL ESTATE OPERA	6200 PARKER RD. #203	PLANO, 75093	109
27	TIERII	498LLE002Z21	0.210 W	PRESBYTERIAN HOSPITAL OF PLANO	6200 W. PARKER RD.	PLANO, 75093	111
27	TIERII	5NKQGR002L14	0.210 W	PRESBYTERIAN HOSPITAL OF PLANO	6200 W. PARKER RD.	PLANO, 75093	112
27	TIERII	4791NN002ZNT	0.210 W	PRESBYTERIAN HOSPITAL OF PLANO	6200 W PARKER ROAD	PLANO, 75093	113
27	PST	0064269	0.210 W	TEXAS HEALTH PRESBYTERIAN HOSPITAL PLANO	6200 W PARKER RD	PLANO, 75093	114
28	IHW	87267	0.220 E	WOMENS DIAGNOSTIC OF TEXAS	5920 W PARKER RD, STE 200	PLANO, 75093	116
29	DCR	RN105766414	0.230 W	PLANO DISCOUNT CLEANERS	6101 WINDHAVEN PKWY STE 195	PLANO, 75093	117
30	TIERII	5PP3RS002XFX	0.240 W	BANKSTON FORD OF FRISCO	6850 HIGHWAY 121	FRISCO, 75034	118
30	TIERII	50HRRE002ERH	0.240 W	BANKSTON FORD OF FRISCO	6850 HIGHWAY 121	FRISCO, 75034	119
30	PST	0070953	0.240 W	BANKSTON FORD	6580 STATE HWY 121	FRISCO, 75034	120
31	TIERII	TX5668008	0.290 E	VERIZON PLANO YEARY (TX5668008)	5928 YEARY ROAD	PLANO, 75093	121
32	TIERII	7RJUM9003E66	0.380 E	DUPLICATE - NTTA - GLENEAGLES OFFICE CO	5900 W. PLANO PKWY	PLANO, 75093	124
33	TIERII	FAWS01150	0.400 E	PLANO CAMPUS - ZX00EL	5601 LEGACY DRIVE	PLANO, 75024	125
34	TIERII	50HW88002MVM	0.410 W	BANKSTON CHRYSLER JEEP DODGE	6600 HIGHWAY 121	FRISCO, 75034	126
34	TIERII	5P2WVH002FW	0.410 W	BANKSTON CHRYSLER JEEP DODGE OF FRISCO	6600 HIGHWAY 121	FRISCO, 75034	127
35	VCP	2388	0.440 S	HAVERWOOD CENTER-POLO DRY CLEANING & LAU	18900 DALLAS PKWY SUITE 100	DALLAS	128
35	APAR	2388	0.440 S	HAVERWOOD CENTER POLO DRY CLEANING & LAU	18900 DALLAS PKWY STE	COLLIN, 75287	129

REPORT SUMMARY OF LOCATABLE SITES

MAP ID#	DATABASE NAME	SITE ID#	DISTANCE FROM SITE	SITE NAME	ADDRESS	CITY, ZIP CODE	PAGE #
36	TIERII	4VM33S00D30M	0.460 E	PLANO/CENTRE HEADQUARTERS	7000 PARKWOOD BOULEVARD	PLANO, 75024	130
36	TIERII	47ASW30298VG	0.460 E	EDS INFORMATION SERVICES - CENTRE/HQ	7000 PARKWOOD	PLANO, 75024	133
36	TIERII	5LEK3T002F1K	0.460 E	PLANO/CENTRE HEADQUARTERS	7000 PARKWOOD BOULEVARD	PLANO, 75024	136
36	TIERII	6ZV8NZ01ZBH6	0.460 E	HEWLETT-PACKARD COMPANY - PDC01	7000 PARKWOOD BOULEVARD	PLANO, 75024	138
37	TIERII	4981U800PHW7	0.480 E	FIRE STATION NO. 7	5602 DEMOCRACY DRIVE	PLANO, 75024	139

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Technical Memos

Contents

NORTH TEXAS TOLLWAY AUTHORITY

5900 West Plano Parkway, Suite 100 ● Plano, Texas 75026 ● (214) 461-2000 ● Fax (214) 528-4826 ● www.ntta.org

TECHNICAL MEMORANDUM

Date: December 20, 2012

To: Lori Shelton

From: Julie Morse, Lupe Pettit

Project: DNT 4th Lane Expansion and DNT/PGBT Interchange Improvements

Re: Traffic Air Quality Analysis

The proposed project is located just south of the City of Frisco which is the portion of Collin County that has been designated by the Environmental Protection Agency (EPA) as a nonattainment area for the 2008 lead National Ambient Air Quality Standard (NAAQS), effective December 31, 2010. Transportation conformity is required under the Clean Air Act Amendments Section 176(c) [42 U.S. Code 7506(c)] to ensure that federally supported highway and transit project activities are consistent with the purpose of the State Implementation Plan (SIP) for transportation related criteria pollutants. However, in light of the elimination of lead additives from gasoline, transportation conformity does not apply to the lead NAAQS (2008 Final Lead NAAQS Rule, preamble page [73 Federal Register 67043], November 12, 2008).

Nevertheless the project is located in Collin County, which is part of the EPA's designated ten-county moderate nonattainment area for the 2008 eight-hour standard for the pollutant ozone; therefore, the transportation conformity rule applies. All projects in the North Central Texas Council of Government's (NCTCOG's) Transportation Improvement Program (TIP) that are proposed for federal or state funds were initiated in a manner consistent with federal guidelines in Section 450, of Title 23 Code of Federal Regulations (CFR) and Section 613.200, Subpart B, of Title 49 CFR. Energy, environment, air quality, cost, and mobility considerations are addressed in the programming of the TIP. The proposed project is included in and consistent with the area's financially constrained long-range Metropolitan Transportation Plan (MTP), *Mobility 2035*. The project is programmed to be added to the 2013-2016 TIP during the February 2013 revision cycle. The U.S. Department of Transportation (Federal Highway Administration [FHWA]/Federal Transit Administration [FTA]) found the MTP and the TIP to conform to the SIP on July 14, 2011 and November 1, 2012, respectively. Copies of the following reference documents are attached: ***Mobility 2035* Proposed Recommendations - Corridor Fact Sheet 14**, ***Mobility 2035* Corridor Fact Sheet Summary**, and **2013-2016 TIP Pages**.

According to CDM Smith traffic data dated December 2012, the average daily traffic (ADT) for DNT between PGBT and SRT is projected to be 173,800 vehicles per day (vpd) in 2016 (estimated time of completion, assumed opening year) and 223,600 vpd in 2035 (design year); therefore, a Traffic Air Quality Analysis (TAQA) is required.

Topography and meteorology of the area in which the project is located would not seriously restrict dispersion of the air pollutants. Carbon monoxide (CO) concentrations for the proposed project were modeled at sensitive receptors along the right-of-way line using CALINE3 and MOBILE6.2 and factoring in adverse meteorological conditions in accordance with the Texas

Department of Transportation's 2006 *Air Quality Guidelines* (rev. 2011). Local concentrations of CO are not expected to exceed national standards at any time. The results of the analysis are summarized in **Table 1**.

Table 1: Carbon Monoxide Concentrations

Year	Location Description	1-HR CO (ppm)*	1-HR % NAAQS	8-HR CO (ppm)*	8-HR % NAAQS
2016	Dallas North Tollway between Chapel Hill Blvd. and Windhaven Pkwy.	5.00	14.29	3.08	34.22
2035		5.30	15.14	3.26	36.22

**The NAAQS for CO is 35 ppm for 1-hour and 9 ppm for 8-hour. Analysis includes a 1-hour background concentration of 3.7 ppm and an 8-hour background concentration of 2.3 ppm.*

Although the proposed project is adding single occupancy vehicle capacity; a Congestion Management Process (CMP) analysis is not required because the proposed project has no FHWA/FTA involvement.

MGP/mgp

Attachments:

Mobility 2035 Proposed Recommendations - Corridor Fact Sheet 14
Mobility 2035 Corridor Fact Sheet Summary
2013-2016 TIP Pages

Roadway Corridor Fact Sheet 14
Dallas North Tollway

Project Description

This project involves the expansion of the Dallas North Tollway from six to eight tollway lanes between Royal Lane in Dallas and Sam Rayburn Tollway (SH 121) at the Plano/Frisco boundary in Collin County. The project will add capacity to a corridor experiencing significant population and employment growth.

Corridor Information

ROUTE	LIMITS	COST
Dallas North Tollway	Sam Rayburn Tollway (SH 121) to Royal Lane	$397,200,000

Demographic Information Within One Mile of Corridor

POPULATION PROFILE	
Population	96,337
Number of Households	48,406
Population Below Poverty	5.9%
Population over 65	6.8%
African American	6.4%
Hispanic	12.6%
Asian/Pacific Islander	6.2%
American Indian/Native Alaskan	0.4%
Total Minority	27.2%

Source: Census 2000

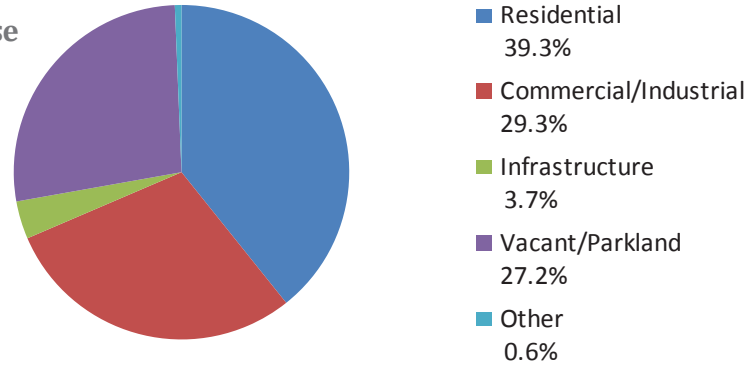
MAJOR EMPLOYERS	
Bank of America Home Loans	7,910
JC Penny	5,100
HP/EDS	5,000
Nations Broadband	2,500
JP Morgan Chase	2,390
CHC Acquisition Corp.	2,000
Capital One Auto Finance	1,415
Mary Kay Cosmetics	1,183

Source: NCTCOG Employment Database, 2010

Legislative Districts Within One Mile of Corridor

TEXAS SENATE	TEXAS HOUSE OF REPRESENTATIVES	UNITED STATES CONGRESS
Florence Shapiro-8	Burt Solomons-65	Sam Johnson-3
Chris Harris-9	Van Taylor-66	Kenny Marchant-24
John J. Carona-16	Jerry Madden-67	Pete Sessions-32
	Ken Paxton, Jr.-70	
	Stefani Carter-102	
	Will Hartnett-114	
	Jim Jackson - 115	

Land Use

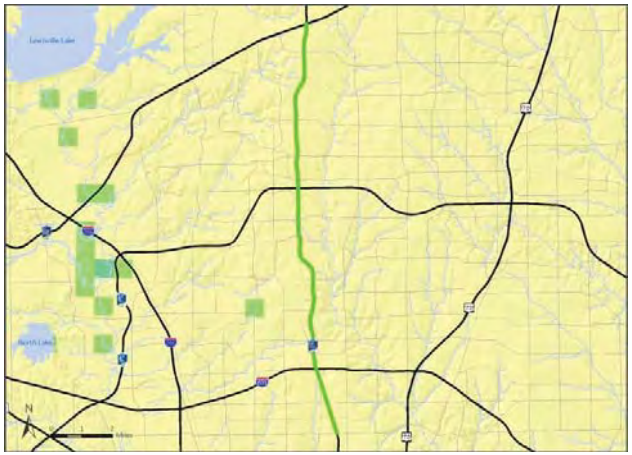


NCTCOG Regional Ecosystem Framework Score* (Range: 14 - 37)

SUBWATERSHED NAME	REF COMPOSITE SCORE
Floyd Branch-White Rock Creek	14
Headwaters White Rock Creek	15
Bachman Branch-Elm Fork Trinity River	20
Indian Creek-Elm Fork Trinity River	21
Farmers Branch-Elm Fork Trinity River	23
Stewart Creek-Little Elm Reservoir	24

*Lower REF score indicates less resource vulnerability, higher score indicates more resource vulnerability.

Ecological Importance in Corridor



Legend

GISSTData_NEWHUCS

REAPComp

1 – Lowest Ecological Importance

2 – Medium-low Ecological Importance

3 – Medium Ecological Importance

4 – Medium-high Ecological Importance

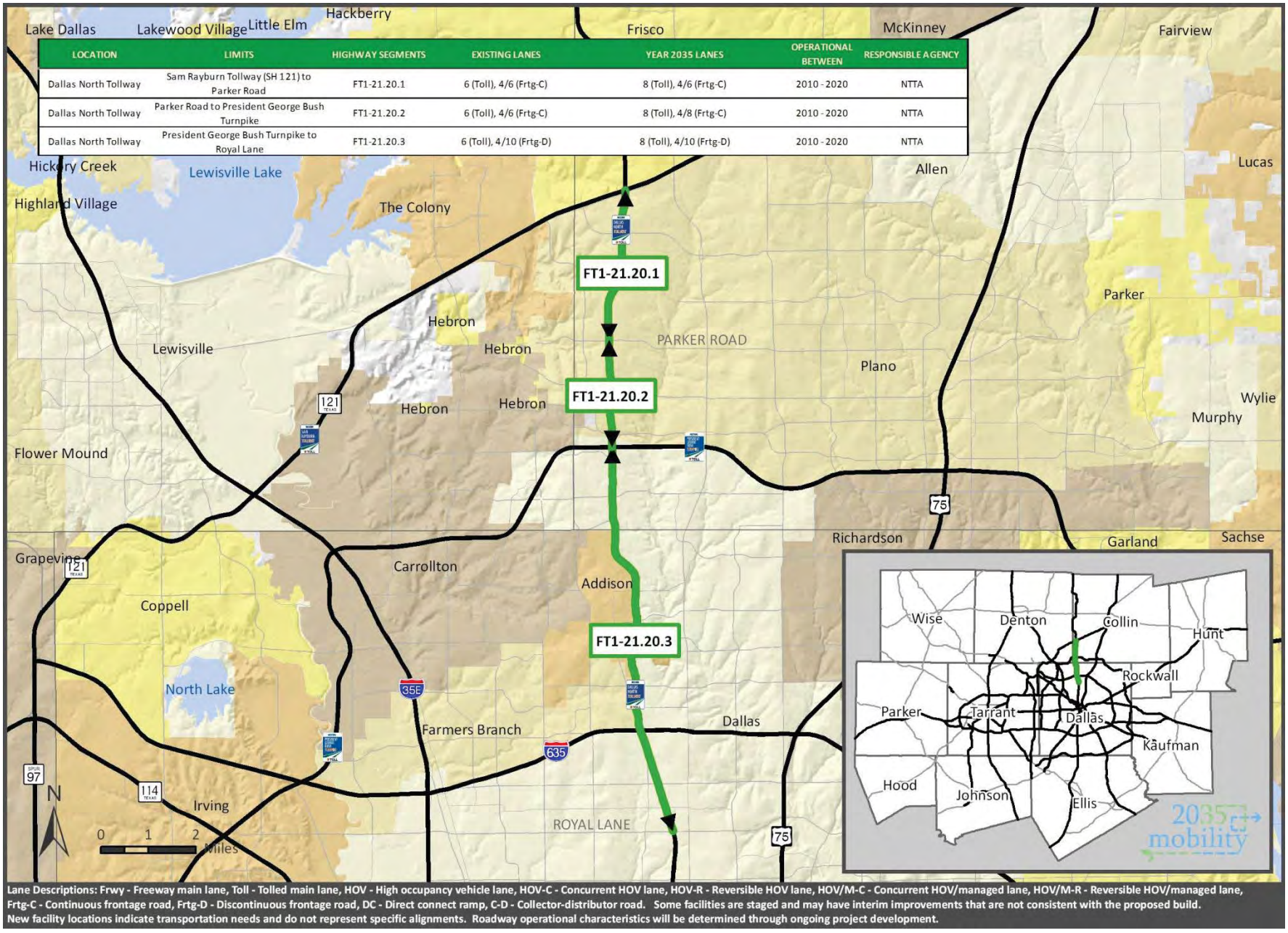
5 – High Ecological Importance

EPA's Regional Ecosystem Assessment Protocol Ecological Importance is a combination of Diversity, Rarity, and Sustainability Layers. The top 1% highly important ecological areas in each ecoregion are blue, followed by the top 2 to 10%, 11 to 25%, 26 to 50%, and 51 to 100% (yellow). This layer should be used as a screening tool to identify the optimum ecological areas for protection and mitigation. More information at www.nctcog.org/traces.

North Central Texas Council of Governments

Dallas North Tollway

LOCATION	LIMITS	HIGHWAY SEGMENTS	EXISTING LANES	YEAR 2035 LANES	OPERATIONAL BETWEEN	RESPONSIBLE AGENCY
Dallas North Tollway	Sam Rayburn Tollway (SH 121) to Parker Road	FT1-21.20.1	6 (Toll), 4/6 (Frtg-C)	8 (Toll), 4/6 (Frtg-C)	2010 - 2020	NTTA
Dallas North Tollway	Parker Road to President George Bush Turnpike	FT1-21.20.2	6 (Toll), 4/6 (Frtg-C)	8 (Toll), 4/8 (Frtg-C)	2010 - 2020	NTTA
Dallas North Tollway	President George Bush Turnpike to Royal Lane	FT1-21.20.3	6 (Toll), 4/10 (Frtg-D)	8 (Toll), 4/10 (Frtg-D)	2010 - 2020	NTTA



Lane Descriptions: Frwy - Freeway main lane, Toll - Tolled main lane, HOV - High occupancy vehicle lane, HOV-C - Concurrent HOV lane, HOV-R - Reversible HOV lane, HOV/M-C - Concurrent HOV/managed lane, HOV/M-R - Reversible HOV/managed lane, Frtg-C - Continuous frontage road, Frtg-D - Discontinuous frontage road, DC - Direct connect ramp, C-D - Collector-distributor road. Some facilities are staged and may have interim improvements that are not consistent with the proposed build. New facility locations indicate transportation needs and do not represent specific alignments. Roadway operational characteristics will be determined through ongoing project development.

Fact Sheet ID	Project Corridor	Location	Limits	MTP ID	Lane Summary *		Year Operational Between **	Responsible Agency ***	YOE Total Project Cost
					Existing	2035			
9	SH 114/SH 121 DFW Connector	SH 121	FM 2499 to IH 635	FT1-11.50.3	4 (Frwy), 4/6 (Frtg-C)	8 (Frwy) + 7 CD, 4/6 (Frtg-C)	2010 - 2020	TxDOT Fort Worth (CDA)	$195,566,000
9	SH 114/SH 121 DFW Connector	SH 121	IH 635 to SH 114	FT1-11.60.1	8 (Frwy)	10 (Frwy) + 9 CD, 6 (Frtg-D)	2010 - 2020	TxDOT Fort Worth (CDA)	cost included above
9	SH 114/SH 121 DFW Connector	SH 121	SH 114 to SH 360	FT1-11.70.1	4 (Frwy), 4 (Frtg-D)	6 (Frwy) + 7 CD, 4/6 (Frtg-D)	2010 - 2020	TxDOT Fort Worth (CDA)	$75,518,000
9	SH 114/SH 121 DFW Connector	SH 360	SH 121 to Stone Myers Parkway	FT1-9.10.1	4 (Frwy)	5 (Frwy)	2010 - 2020	TxDOT Fort Worth (CDA)	cost included above
10	SH 121 Southwest Parkway/Chisholm Trail	IH 30	SH 121 to Henderson Street	FT1-28.20.3	6 (Frwy), 4 (Frtg-C)	8 (Frwy), 4 (Frtg-C)	2010 - 2020	TxDOT Fort Worth	$24,644,000
10	SH 121 Southwest Parkway/Chisholm Trail	IH 30	Henderson Street to IH 35W	FT1-28.20.4	10 (Frwy)	10 (Reconstruct)	2010 - 2020	TxDOT Fort Worth	cost included above
10	SH 121 Southwest Parkway/Chisholm Trail	Southwest Parkway	IH 30 to IH 20	FT1-31.10.1	0	6 (Toll),4/6 (Frtg-D)	2010 - 2020	NTTA	$1,485,472,000
10	SH 121 Southwest Parkway/Chisholm Trail	Southwest Parkway	IH 20 to Altamesa Blvd.	FT1-31.20.1	0	6 (Toll), 4/6 (Frtg-D)	2010 - 2020	NTTA	cost included above
10	SH 121 Southwest Parkway/Chisholm Trail	Southwest Parkway	Altamesa Blvd. to FM 1187	FT1-31.20.2	0	4 (Toll)	2010 - 2020	NTTA	cost included above
10	SH 121 Southwest Parkway/Chisholm Trail	Chisholm Trail Parkway	FM 1187 to US 67	FT1-31.20.3	0	4 (Toll)	2030 - 2035 **	NTTA	cost included above
11	Trinity Parkway	S.M. Wright Parkway	IH 45 to US 175/SH 310	FT1-29.10.1	6 (Frwy), 4/6 (Frtg-D)	6 (ART)	2010 - 2020	TxDOT Dallas	$47,730,000
11	Trinity Parkway	Trinity Parkway	IH 35E/SH 183 to Woodall Rodgers Freeway	FT1-26.10.1	0	6 (Toll)	2020 - 2030	NTTA	$1,801,891,000
11	Trinity Parkway	Trinity Parkway	Woodall Rodgers Freeway to IH 45	FT1-26.10.2	0	6 (Toll), 4 (Frtg-D)	2020 - 2030	NTTA	cost included above
11	Trinity Parkway	Trinity Parkway	IH 45 to SH 310	FT1-26.20.1	0	6 (Toll) + 4 DC, 6 (Frtg-D)	2020 - 2030 **	NTTA/TxDOT Dallas	cost included above
12		Collin County Loop	Dallas North Tollway to US 75	FT1-110.20.1	0	6 (Toll), 4/6 (Frtg-C)	2020 - 2030 **	NTTA	$1,110,500,000
12		Collin County Loop	US 75 to SH 121	FT1-110.30.1	0	6 (Toll), 4/6 (Frtg-C)	2020 - 2030 **	NTTA	$403,000,010
13		Dallas North Tollway	FM 121 to FM 428	FT1-21.10.1	0	6 (Toll), 6 (Frtg-D)	2020 – 2030	NTTA	$561,000,000
13		Dallas North Tollway	FM 428 to US 380	FT1-21.10.2	0	6 (Toll), 6/8 (Frtg-C)	2010 – 2020	NTTA	$433,000,000
14		Dallas North Tollway	Sam Rayburn Tollway *(SH 121)* to Parker Road	FT1-21.20.1	6 (Toll), 4/6 (Frtg-C)	8 (Toll), 4/6 (Frtg-C)	2010 – 2020	NTTA	$211,000,000
14		Dallas North Tollway	Parker Road to President George Bush Turnpike	FT1-21.20.2	6 (Toll), 4/6 (Frtg-C)	8 (Toll), 4/8 (Frtg-C)	2010 – 2020	NTTA	$186,200,000
14		Dallas North Tollway	President George Bush Turnpike to Royal Lane	FT1-21.20.3	6 (Toll), 4/10 (Frtg-D)	8 (Toll), 4/10 (Frtg-D)	2010 – 2020	NTTA	cost included above
15		IH 30 - Tarrant County	Ballpark Way to President George Bush Turnpike - Western Extension *(SH 161)*	FT1-28.40.4	6 (Frwy) + 1 (HOV-R)	6 (Frwy) + 2 (HOV/M-R), 4/6 (Frtg-D)	2010 – 2020	TxDOT Fort Worth	$5,000,000
16		IH 30 - Dallas County	President George Bush Turnpike - Western Extension *(SH 161)* to Belt Line Road	FT1-28.50.1	6 (Frwy) + 2 (HOV-R)	8 (Frwy) + 2 (HOV/M-R), 6 (Frtg-C)	2010 – 2020	TxDOT Dallas	$71,169,000
16		IH 30 - Dallas County	Belt Line Road to Loop 12	FT1-28.50.2	6 (Frwy) + 2 (HOV-R), 4/6 (FRTG-D)	8 (Frwy) + 2/3 (HOV/M-R), 4/6 (Frtg-D)	2010 – 2020	TxDOT Dallas	cost included above
16		IH 30 - Dallas County	Loop 12 to Cockrell Hill Road	FT1-28.50.3	8 (Frwy) + 1 (HOV-EB), 6 (Frtg-D)	8 (Frwy) + 2/3 (HOV/M-R), 6 (Frtg-D)	2010 – 2020	TxDOT Dallas	cost included above

Placeholder

2013-2016 TIP Pages containing DNT 4th Lane Project

Anticipated to be available for insertion 1Q 2013

NORTH TEXAS TOLLWAY AUTHORITY

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TECHNICAL MEMORANDUM

Date: December 20, 2012

To: Lori Shelton

From: Julie Morse, Lupe Pettit

Project: DNT 4th Lane Expansion and DNT/PGBT Interchange Improvements

Re: Traffic Noise Analysis

This analysis was accomplished in accordance with TxDOT's FHWA approved 2011 *Guidelines for Analysis and Abatement of Roadway Traffic Noise*.

Sound from highway traffic is generated primarily from a vehicle's tires, engine, and exhaust. It is commonly measured in decibels and is expressed as "dB."

Sound occurs over a wide range of frequencies. However, not all frequencies are detectable by the human ear; therefore, an adjustment is made to the high and low frequencies to approximate the way an average person hears traffic sounds. This adjustment is called A-weighting and is expressed as "dB(A)."

Also, because traffic sound levels are never constant due to the changing number, type, and speed of vehicles, a single value is used to represent the average or equivalent sound level and is expressed as "Leq."

The traffic noise analysis typically includes the following elements:

- Identification of land use activity areas that might be impacted by traffic noise;
- Determination of existing noise levels;
- Prediction of future noise levels;
- Identification of possible noise impacts; and
- Consideration and evaluation of measures to reduce noise impacts.

The FHWA has established the following Noise Abatement Criteria (NAC) for various land use activity areas that are used as one of two means to determine when a traffic noise impact would occur (**Table 1**).

Table 1: Noise Abatement Criteria

Activity Category	FHWA dB(A) Leq	TxDOT dB(A) Leq	Description of Land Use Activity Areas
A	57 (exterior)	56 (exterior)	Lands on which serenity and quiet are of extraordinary significance and serve an important public need and where the preservation of those qualities is essential if the area is to continue to serve its intended purpose.
B	67 (exterior)	66 (exterior)	Residential.
C	67 (exterior)	66 (exterior)	Active sport areas, amphitheaters, auditoriums, campgrounds, cemeteries, day care centers, hospitals, libraries, medical facilities, parks, picnic areas, places of worship, playgrounds, public meeting rooms, public or nonprofit institutional structures, radio studios, recording studios, recreation areas, Section 4(f) sites, schools, television studios, trails, and trail crossings.
D	52 (interior)	51 (interior)	Auditoriums, day care centers, hospitals, libraries, medical facilities, places of worship, public meeting rooms, public or nonprofit institutional structures, radio studios, recording studios, schools, and television studios.
E	72 (exterior)	71 (exterior)	Hotels, motels, offices, restaurants/bars, and other developed lands, properties, or activities not included in A-D or F.
F	--	**--**	Agricultural, airports, bus yards, emergency services, industrial, logging, maintenance facilities, manufacturing, mining, rail yards, retail facilities, shipyards, utilities (water resources, water treatment, electrical), and warehousing.
G	--	**--**	Undeveloped lands that are not permitted.

A noise impact occurs when either the absolute or relative criterion is met:

Absolute criterion: the predicted noise level at a receiver approaches, equals, or exceeds the NAC. "Approach" is defined as 1 dB(A) below the FHWA NAC. For example, a noise impact would occur at a Category B residence if the noise level is predicted to be 66 dB(A) or above.

Relative criterion: the predicted noise level substantially exceeds the existing noise level at a receiver even though the predicted noise level does not approach, equal, or exceed the NAC. "Substantially exceeds" is defined as more than 10 dB(A). For example, a noise impact would occur at a Category B residence if the existing level is 54 dB(A) and the predicted level is 65 dB(A) [11 dB(A) increase].

When a traffic noise impact occurs, noise abatement measures must be considered. A noise abatement measure is any positive action taken to reduce the impact of traffic noise on an activity area.

FHWA traffic noise modeling software was used to calculate existing and predicted traffic noise levels. The model primarily considers the number, type, and speed of vehicles; highway

alignment and grade; cuts, fills, and natural berms; surrounding terrain features; and the locations of activity areas likely to be impacted by the associated traffic noise.

Existing and predicted traffic noise levels were modeled at receiver locations (**Table 2** and **Constraints Maps**) that represent the land use activity areas adjacent to the proposed project that might be impacted by traffic noise and potentially benefit from feasible and reasonable noise abatement.

Table 2: Traffic Noise Levels [dB(A) Leq]

Receiver	NAC Category	NAC dB(A) Leq	Existing	Predicted (2035)	Change (+/-)	Noise Impact
R1 - Offices	E	72	70	69	-1	No
R2 - Restaurant	E	72	71	72	+1	Yes
R3 - Parkway Hills Baptist Church	D	52	47	48	+1	No
R4 - Dallas Baptist University	D	52	44	46	+2	No
R5 - Restaurant	E	72	70	73	+3	Yes
R6 - Hotel	E	72	71	74	+3	Yes
R7 - Hotel	E	72	71	73	+2	Yes
R8 - Medical office	D	52	42	44	+2	No
R9 - Gas station	E	72	71	74	+3	Yes
R10 - Offices	E	72	68	71	+3	Yes
R11 - Agricultural	F	--	72	74	+2	--
R12 - Auto dealership	E	72	67	69	+2	No
R13 - Hotel	E	72	70	72	+2	Yes
R14 - Bank	E	72	65	68	+3	No
R15 - Townhomes	B	67	58	63	+5	No

Source: Study Team, December 2012.

As indicated in **Table 2**, the proposed project would result in a traffic noise impact and the following noise abatement measures were considered: traffic management, alteration of horizontal and/or vertical alignments, acquisition of undeveloped property to act as a buffer zone, and the construction of traffic noise barriers.

Before any abatement measure can be proposed for incorporation into the project, it must be both feasible and reasonable. In order to be “feasible,” the abatement measure must be able to reduce the noise level at greater than 50% of impacted, first row receivers by at least 5 dB(A); and to be “reasonable,” it must not exceed the cost-effectiveness criterion of $25,000 for each receiver that would benefit by a reduction of at least 5 dB(A), and the abatement measure must be able to reduce the noise level of at least one impacted, first row receiver by at least 7 dB(A).

Traffic management: control devices could be used to reduce the speed of the traffic; however, the minor benefit of 1 dB(A) per 5 miles/hour reduction in speed does not outweigh the associated increase in congestion and air pollution. Other measures such as time or use restrictions for certain vehicles are prohibited on state highways.

Alteration of horizontal and/or vertical alignments: any alteration of the existing alignment would displace existing businesses and residences, require additional ROW, and not be cost effective/reasonable.

Buffer zone: the acquisition of undeveloped property to act as a buffer zone is designed to avoid rather than abate traffic noise impacts and, therefore, is not feasible.

Traffic Noise barriers: this is the most commonly used noise abatement measure. Traffic noise barriers were evaluated for each impacted receiver location with the following results:

R2, R5, R6, R7, R9, R10, and R13: These receivers represent restaurants, hotels, gas stations, and offices with driveways facing the roadway. Gaps in a traffic noise barrier placed along the ROW would satisfy access requirements but the resulting non-continuous barrier segments would not be sufficient to achieve the minimum, feasible reduction of 5 dB(A) or the noise reduction design goal of 7 dB(A). A traffic noise barrier along the mainlanes would not restrict views and access by potential customers and may achieve the minimum feasible reduction of 5 dB(A) or the noise reduction design goal of 7 dB(A) at the businesses; however, it would exceed the reasonable, cost-effectiveness criterion of $25,000.

None of the above noise abatement measures would be both feasible and reasonable; therefore, no abatement measures are proposed for this project.

To avoid noise impacts that may result from future development of properties adjacent to the project, local officials responsible for land use control programs must ensure, to the maximum extent possible, no new activities are planned or constructed along or within the following predicted (2035) noise impact contours shown in **Table 3**.

Table 3: Traffic Noise Contours [dB(A) Leq]

Land use	Impact Contour	Distance from ROW
NAC Categories B&C	66	200 feet
NAC Category E	71	

Source: Study Team, December 2012.

Noise associated with the construction of the project is difficult to predict. Heavy machinery, the major source of noise in construction, is constantly moving in unpredictable patterns. Although construction normally occurs during daylight hours when occasional loud noises are more tolerable, nighttime construction would be substantial for the proposed project because it involves a major interchange and two major highways. Nighttime construction would be utilized in order to help minimize disturbance to vehicular traffic. Provisions would be included in the plans and specifications that require the contractor to make every reasonable effort to minimize construction noise through abatement measures such as work-hour controls (i.e., reduced nighttime construction near residential areas) and proper maintenance of muffler systems.

A copy of this traffic noise analysis would be available to the public and local officials during stakeholder and public meetings. The NTTA is no longer responsible for providing noise abatement for new development adjacent to the project after the commencement of construction.

MGP/mgp

NORTH TEXAS TOLLWAY AUTHORITY

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TECHNICAL MEMORANDUM

Date: November 30, 2012

To: Lori Shelton

From: Julie Morse, Courtney Filer

Project: DNT 4th Lane Expansion and DNT/PGBT Interchange Improvements

Re: Community Impacts Baseline Assessment

Regional and Community Growth

According to the U.S. Census Bureau's *Census 2010*, the DFW Metroplex is the fourth largest metropolitan area in the U.S. Between 2000 and 2010, the U.S. Census Bureau estimates the DFW Metroplex added over 1.1 million residents, equating to a growth rate of approximately 22%. Such growth has pushed the DFW Metroplex ahead of 35 states with respect to total population, and between 2000 and 2010, the DFW Metroplex was the second fastest growing metropolitan area in the U.S. *Census 2010* also reveals continued growth in Collin County and the City of Plano during the same time period. From 2000 to 2010, Collin County gained 290,666 new residents, and the City of Plano gained 37,811 new residents, equating to growth rates of approximately 59% and 17%, respectively.

Household population projections generated by the North Central Texas Council of Governments (NCTCOG), a regional planning agency for the DFW Metroplex and the DFW Metropolitan Planning Organization (MPO), indicate dramatic growth will likely occur in the DFW Metropolitan Planning Area (MPA) through the year 2040. The NCTCOG's *North Central Texas 2040 Demographic Forecast* projects Collin County to grow to a household population of 1,526,634 residents by 2040, an increase of 744,293 persons and an approximate increase of 95% from its 2010 Census-documented population. The 12-county NCTCOG forecast area, which represents the DFW MPA and differs slightly from the counties comprising the DFW Metroplex as designated by the U.S. Census Bureau, is projected to grow to a household population of 10,543,336 residents by 2040.

Household population projections generated by the NCTCOG's *2040 Demographic Forecast* for North Central Texas also reveal robust growth for the specific forecast market area which is traversed by the proposed project. According to the NCTCOG, the forecast market area (#73) which contains the limits of the proposed project is projected to experience an increase in household population by approximately 44.0%, and the NCTCOG MPA is expected to increase 82.5%. Employment projections provided by the NCTCOG for the forecast market area indicate strong growth in employment. From 2005 to 2040, employment is projected to increase approximately 65.1%, while employment within the NCTCOG MPA is expected to increase approximately 82.3%. **Table 1** summarizes population and employment growth for the forecast market areas traversed by the proposed project in addition to the 12-county NCTCOG forecast area.

Table 1: Population and Employment Trends, 2000 - 2040

2040 Demographic Forecast Market Area	Household Population				Employment			
	2005*	2035	2040	Percent Change: 2005 to 2040	2005	2035	2040	Percent Change: 2005 to 2040
73	185,945	241,076	249,089	44.0%	101,675	159,654	167,847	65.1%
NCTCOG 12-County MPA	5,777,272	9,833,378	10,543,336	82.5%	3,624,051	6,177,016	6,606,515	82.3%

Source: NCTCOG, 2040 Demographic Forecast. http://www.nctcog.org. *Population totals for 2005 are taken from the NCTCOG demographic forecast and are not representative of the Census 2000- or 2010-documented populations for the given geographic areas.

Environmental Justice

The three fundamental principles of environmental justice include:

1. To avoid, minimize, or mitigate disproportionately high and adverse human health or environmental effects, including social and economic effects, on minority populations and low-income populations;
2. To ensure the full and fair participation by all potentially affected communities in the transportation decision-making process; and
3. To prevent the denial of, reduction in, or significant delay in the receipt of benefits by minority populations and low-income populations.

The U.S. Department of Transportation (DOT) Order 5610.2a defines a minority as a person who is:

- **Black** (having origins in any of the black racial groups of Africa);
- **Hispanic or Latino** (of Mexican, Puerto Rican, Cuban, Central or South American, or other Spanish culture or origin, regardless of race);
- **Asian American** (having origins in any of the original peoples of the Far East, Southeast Asia, or the Indian subcontinent);
- **American Indian or Alaska Native** (having origins in any of the original peoples of North America, South America – including Central America, and who maintains cultural identification through tribal affiliation or community recognition); or
- **Native Hawaiian and Other Pacific Islander** (having origins in any of the original peoples of Hawaii, Guam, Samoa, or other Pacific Islands.)[1]

For purposes of this analysis, an environmental justice population is present when the total minority population percentage within the study area exceeds 50%. Data from the U.S. Census Bureau *2006-2010 American Community Survey (ACS) 5-Year Estimates* representing the 10 census tracts traversed by the proposed project limits were used for the minority population analysis. The attached **2010 Census Geography Map** illustrates the census geography boundaries from *Census 2010* used in the analyses presented in this technical memorandum.

The DOT Order defines low-income as a person whose median household income is at or below the Department of Health and Human Services (DHHS) poverty guidelines. The DHHS

[1] U.S. Department of Transportation, *DOT Order 5610.2(a), Final DOT Environmental Justice Order.* May 2, 2012.

poverty guideline for a family of four is $23,050 in the year 2012. Data from the *2006-2010 ACS 5-Year Estimates* representing the 10 census tracts traversed by the proposed project limits were used for the low-income population analysis.

Minority Characteristics
Data from the *2006-2010 ACS 5-Year Estimates* for the 10 census tracts that are traversed by the proposed project limits were used in this analysis. **Table 2** contains the percent minority population for each census tract in the minority population study area.

Table 2: Percent Minority Population Data

Census Tract	Total Population	Not Hispanic or Latino						Hispanic or Latino of Any Race	Total Minority Population
		Black or African American	American Indian and Alaska Native	Asian	Pacific Islander	Other Race	Two or More Races		
Comparison Geographies									
Collin County	738,745	8.0	0.5	10.8	0.1	2.7	2.2	14.2	38.5
City of Plano	256,099	6.9	0.5	16.2	0.1	2.5	1.9	14.9	43.0
Study Area									
CT 316.45	2,162	1.7	0.2	14.4	<0.0	0.7	2.0	2.7	21.7
CT 316.46	5,598	3.5	0.2	19.2	<0.0	1.0	2.7	5.3	32.0
CT 316.47	3,038	8.2	0.2	13.9	0.1	3.4	2.1	8.5	36.3
CT 316.48	6,880	4.6	0.3	15.8	<0.0	1.3	3.3	6.9	32.2
CT 316.49	4,466	2.6	0.3	9.2	0.0	0.6	2.5	5.4	20.7
CT 316.56	2,535	11.5	0.3	15.5	0.0	2.6	3.2	11.0	44.1
CT 316.57	1,268	11.4	0.2	10.9	0.2	3.0	3.4	12.9	42.0
CT 316.58	3,868	9.6	0.4	13.3	0.1	2.4	3.3	9.3	38.3
CT 317.12	4,967	16.3	0.5	7.8	<0.0	5.5	3.8	15.5	49.5
CT 317.14	5,028	33.5	0.2	5.8	<0.0	7.1	3.7	17.2	67.5
Total Minority Population Study Area	**39,810**	**10.6**	**0.3**	**12.7**	**<0.0**	**2.8**	**3.1**	**9.5**	**38.9**

Source: U.S. Census Bureau, *Census 2010,* Summary File 1 - Race and Hispanic or Latino Origin, Table QT-P3.

The 10 census tracts comprising the minority population study area have a total population of 39,810. Overall, minorities account for approximately 38.9% of the minority population study area. The census tracts within the minority population study area exhibit minority populations that range from 20.7% to 67.5%; one census tract (CT 317.14) exhibits a minority percentage exceeding 50% which is indicative of the presence of an environmental justice community. The comparison geographies indicate the general area encompassing the proposed project is populated by similar minority populations.

Income Characteristics
The 10 census tracts containing the proposed project's limits were used for this analysis. Median household income and poverty status for the low-income population study area are listed in **Table 3**. Median household income of the census tracts within the low-income

population study area ranged from $31,406 to $185,486 according to the *2006-2010 ACS 5-Year Estimates*.

Table 3: Median Household Income and Poverty Status

Census Tract	Population*	Median Household Income	Persons Below Poverty Level	
			Number	Percent
CT 316.45	2,233	$185,486	63	2.8%
CT 316.46	5,633	$144,583	186	3.3%
CT 316.47	3,434	$70,922	145	4.2%
CT 316.48	7,293	$134,655	196	2.7%
CT 316.49	4,674	$124,000	170	3.6%
CT 316.56	2,299	$73,102	24	1.0%
CT 316.57	201	$31,406	57	28.4%
CT 316.58	3,222	$58,801	383	11.9%
CT 317.12	5,049	$57,217	382	7.6%
CT 317.14	4,930	$41,036	754	15.3%
Total Low-Income Population Study Area	**38,968**	**N/A**	**2,360**	**6.1%**

Source: U.S. Census Bureau, *2006-2010 American Community Survey 5-Year Estimates*, Table B19013 (Median Household Income in the Past 12 Months in 2010 Inflation-Adjusted Dollars) and Table S1701 (Poverty Status in the Past 12 Months). *Population for whom poverty status is determined.

As shown in **Table 3**, there is a variation in the rate of median household income among the census tracts that comprise the low-income population study area. None of the census tracts contain median household incomes below the DHHS 2012 poverty guideline of $23,050. The persons below poverty level percentage for the 10 census tracts ranged from approximately 1.0% to 28.4%. The percentage of the total study area below the poverty level is approximately 6.1%.

Limited English Proficiency Populations

Limited English Proficiency (LEP) persons are defined by the DOT as individuals with a primary or home language other than English who must, due to limited fluency in English, communicate in that primary or home language if the individuals are to have an equal opportunity to participate effectively in or benefit from any aid, service, or benefit provided by the transportation provider.

Census tract data was obtained from the U.S. Census Bureau *2006-2010 ACS 5-Year Estimates* database. According to the information, the "Ability to Speak English," for the population 5 years and older indicates approximately 5.9% of the population within the 10 census tracts along the proposed project limits speaks English "Well," "Not Well," or "Not at All." Nine of the 10 census tracts which contain the proposed project limits contain LEP populations according to the *2006-2010 ACS 5-Year Estimates*; LEP populations among the 10 census tracts ranged from approximately 0.0% to 11.5%. Specific LEP languages and respective percentages represented in the LEP study area are the following: Spanish (2.5%), Other Indo-European (1.2%), Asian and Pacific Islander (2.1%), and Other (0.2%). **Table 4** summarizes the LEP population for the study area.

Table 4: Percentage LEP Population

Census Tract	Total Population 5 Years and Older	Total Number Who Speak English "Well," "Not Well," or "Not at All"	Percent LEP
CT 316.45	2,028	63	3.1%
CT 316.46	5,426	328	6.0%
CT 316.47	3,265	257	7.9%
CT 316.48	6,983	358	5.1%
CT 316.49	4,644	112	2.4%
CT 316.56	2,216	107	4.8%
CT 316.57	201	0	0.0%
CT 316.58	3,120	190	6.1%
CT 317.12	4,842	559	11.5%
CT 317.14	4,602	239	5.2%
LEP Study Area Total	**37,327**	**2,213**	**5.9%**

Source: U.S. Census Bureau, *2006-2010 American Community Survey 5-Year Estimates*, Table B16004.

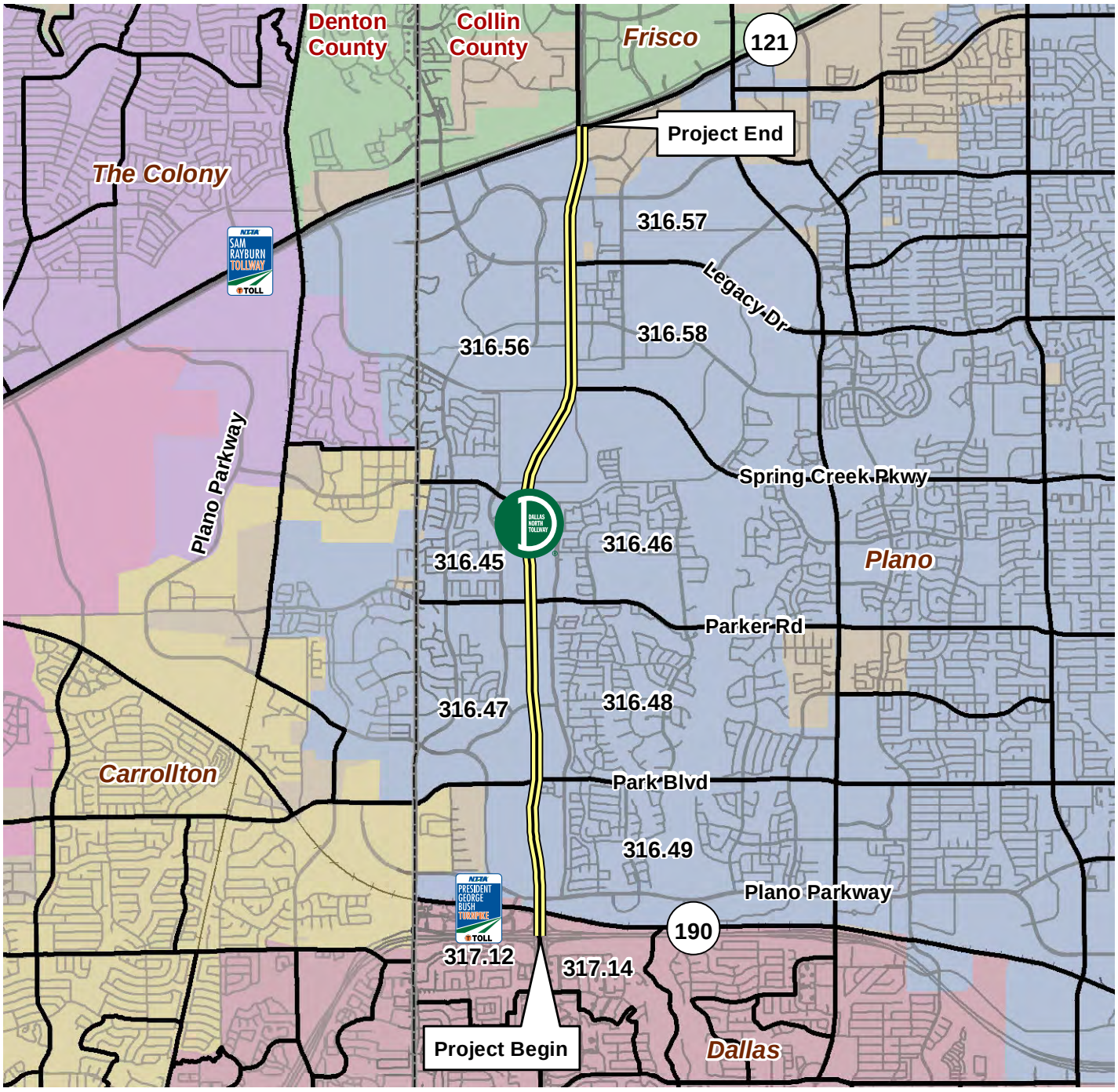
Community Cohesion

Community cohesion is a term that refers to an aggregate quality of a residential area. Cohesion is a social attribute that indicates a sense of community, common responsibility, and social interaction within a limited geographic area. It is the degree to which residents have a sense of belonging to their neighborhood or community or a strong attachment to neighbors, groups, and institutions as a continual association over time.

Community cohesion would likely remain intact because the Dallas North Tollway corridor is an existing facility which serves as a boundary between neighborhoods and communities. There are no distinct neighborhoods, ethnic groups, or other specific groups directly adjacent to the proposed project. As a result, the proposed project would not affect, separate, or isolate any distinct neighborhoods, ethnic groups, or other specific groups. No displacements or relocations would occur due to the proposed project.

CHF/chf

Attachment:
2010 Census Geography Map



N

NTTA
NORTH TEXAS TOLLWAY AUTHORITY

0 0.25 0.5 0.75 1 Miles

LEGEND

- Proposed Project Limits
- Census Tract (2010)
- County Boundary

Source: U.S. Census Data (2010) and NCTCOG GIS Data (2003 - 2007).

2010 CENSUS GEOGRAPHY MAP

Dallas North Tollway (DNT)
from
President George Bush Turnpike (SH 190)
to
Sam Rayburn Tollway (SH 121)

Technical Reports

Contents

Preliminary Jurisdictional Determination of Waters of the U.S.

DNT 4th Lane Expansion and DNT/PGBT Interchange Improvements

Preliminary Jurisdictional Determination of Waters of the U.S.

December 2012

Texas Department of Transportation

NTTA NORTH TEXAS TOLLWAY AUTHORITY

TABLE OF CONTENTS

TABLES

EXHIBITS

APPENDIX

INTRODUCTION/PURPOSE

The North Texas Tollway Authority proposes improvements to the Dallas North Tollway (DNT) from President George Bush Turnpike (PGBT) to Sam Rayburn Tollway (SRT) in Collin County, Texas. The proposed project is approximately 5.5 miles in length. The proposed improvements consist of the addition of one mainlane in each direction. In addition, ramp improvements are proposed at the DNT/PGBT interchange. Minor frontage road modifications are proposed in some locations to accommodate the mainlane and ramp improvements. Approximately 1.47 acres of additional right of way (ROW) is proposed to be needed between Plano Parkway and Park Boulevard.

The proposed project is needed to address existing and projected traffic demands. The purpose of the proposed project is to alleviate peak period congestion along DNT and at the DNT/PGBT interchange.

METHODOLOGY

Approach
Potential jurisdictional waters of the U.S., including wetlands, were preliminarily identified prior to field reconnaissance using the U.S. Department of Agriculture (USDA) soil survey for Collin County, U.S. Fish and Wildlife Service (USFWS) National Wetland Inventory (NWI) Maps (Hebron, Texas), and U.S. Geological Survey (USGS) 7.5-minute topographic maps (Hebron, Texas).

A field investigation was conducted November 9, 2012. The field investigation enabled project scientists to identify potentially jurisdictional waters and wetlands located within the proposed project area. The project area consists of the existing and proposed ROW. Determinations were made as to the potential presence of waters of the U.S., including wetlands, subject to U.S. Army Corps of Engineers (USACE) jurisdiction under Section 404 of the Clean Water Act (CWA) and/or Section 10 of the Rivers and Harbors Act of 1899. Two manuals (1987 *Corps of Engineers Wetland Delineation Manual* [Technical Report Y-87-1] and the *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Great Plains Region)* were used for identifying potential waters of the U.S., including wetlands, based on the presence of hydrophytic vegetation, hydric soils, and wetland hydrology.

The preliminary jurisdictional determination activities specifically consisted of delineating and surveying, where applicable, identified waters and wetlands within the proposed project area. Because the proposed project is located along an existing roadway with adjacent commercial development, the water features observed were contained in culverts and could not be delineated. Field investigations generally followed the methods described in the *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Great Plains Region*.

Once a feature was identified as a potential jurisdictional area, it was assigned a feature number. The water features identified were contained within a culvert through the

proposed project area and a detailed delineation was not possible. Therefore, the characteristic of the feature immediately outside the culvert was utilized to estimate the ordinary high water mark (OHWM) for the feature within the culvert. The term "OHWM" is defined in 33 CFR 328.3(e) as "that line on the shore established by the fluctuations of water and indicated by physical characteristics such as a clear, natural line impressed on the bank; shelving; changes in the character of soil; destruction of terrestrial vegetation; the presence of litter and debris; or other appropriate means that consider the characteristics of the surrounding areas." The width of the stream from OHWM to OHWM and the depth of the stream were estimated and recorded, unless otherwise noted in the descriptions of each water feature. The flow regime of each stream was determined through field observations, USGS topographic maps, Federal Emergency Management Agency (FEMA) floodplain maps, and aerial photography. No wetlands were identified; therefore, no wetland determination data forms were prepared.

The following reference materials were used in conjunction with the recorded field data to evaluate the potential for jurisdictional waters of the U.S., including wetlands, to exist within the project area:

Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Great Plains Region (Version 2.0);

USFWS NWI maps: Hebron;

FEMA Flood Insurance Rate Maps (FIRMs) panels 48085C0365J (Effective Date 6/2/09) and 48085C0355J (Effective Date 6/2/09), for Collin County, Texas;

USGS topographic quadrangle (7.5-minute series): Hebron (2003);

2011 Aerial Photographs, NTTA;

Soil Survey of Collin County, Texas, USDA, Natural Resource Conservation Service, June, 1969; and

National List of Plant Species that Occur in Wetlands: South Plains (Region 6), U.S. Department of the Interior, USFWS, 1988.

Other resources may have been used to a lesser degree during the course of this investigation.

Mapping Conventions
The features identified in the field are contained in culverts through the proposed project area and could not be delineated using survey techniques, such as collecting Geographic Information System (GIS) data. The data collected in the field was utilized with aerials to map the features in ArcMap GIS-Version 10.0. For those features contained within culverts, the approximate feature location was mapped from the culvert inlet to the outfall. The exact route a feature may traverse through the culverts could not be determined in the field.

RESULTS

Maps
The maps generated for this report consist of:

- **Exhibit 1: Project Location Map**;
- **Exhibit 2: USGS Topographic Map** which includes the general location of the project area and delineated areas identified during the field investigations;
- **Exhibit 3: NWI Map** which includes the classification of waters and wetlands according to the NWI; and
- **Exhibit 4: Corridor Map** which depicts the location of the existing/proposed ROW/easements, delineated areas, 100-year floodplains, and existing roads/roadway features in the proposed project area overlaid onto aerial photography.

General Feature Description
Surrounding land use in the area adjacent to the proposed project is primarily retail and commercial. There is an area near the northern limits that is utilized for agricultural purposes. Four water features were identified during the field investigations that intersect the proposed project.

The *Soil Survey of Collin County, Texas* (1969) was reviewed to document the soils occurring at the individual features located within the proposed project area. Four different soil types were identified. The corresponding soil map unit name will be used in the individual feature descriptions. **Table 1** provides descriptions of these mapped soil types.

Table 1: Soil Descriptions

Soil Survey Map Unit Symbol	Map Unit Name	Description	Hydric? (Y or N)	Prime Farmland? (Y or N)
HoB2	Houston Black clay, 2 to 4 percent slope, eroded	An eroded soil that occupies uplands. Slopes average approximately 3 percent. Consists of deep, calcareous clay or chalky marl. Surface runoff is moderately rapid. In sloping areas water erosion is moderately severe.	N	N
HoB	Houston Black clay, 1 to 3 percent slopes	This soil occupies uplands throughout the county and stream terraces in the eastern part. Consists of deep, calcareous clay or chalky marl. Surface runoff and the hazard of erosion are moderate.	N	N

Soil Survey Map Unit Symbol	Map Unit Name	Description	Hydric? (Y or N)	Prime Farmland? (Y or N)
HoA	Houston Black clay, 0 to 1 percent slopes	This soil occupies alluvial terraces along the streams in the eastern part of the county and is on uplands throughout the county. Consists of deep, calcareous clay or chalky marl. Surface runoff is slow.	N	N
EdD2	Eddy gravelly clay loam, 3 to 8 percent slopes, eroded	Soil occurs on convex ridges and knobs in areas that slope to the natural drains. Consists of very shallow, calcareous, loamy soils that are underlain by chalky limestone. Water erosion is severe, surface runoff is rapid, and available water capacity is low.	N	N

Four water features were identified that traverse DNT within the proposed project limits. Descriptions of the water features are below. No wetland features were identified during the field investigations.

Water 1

Water 1 is an intermittent tributary to White Rock Creek. The stream flows from northwest to southeast. The tributary enters a culvert at the edge of the ROW on the west side of DNT. and exits the culvert approximately 1,220 feet east of DNT along Plano Parkway. The OHWM width is approximately 2 feet and the depth is approximately 3 to 5 inches. Approximately 425 linear feet, or 0.02 acre, of the tributary is within the proposed project area. See **Exhibit 4**, **Sheet 1** and **Appendix A**, **Photo 1**.

Upstream from DNT, the tributary receives runoff from existing roadways, businesses, and from undeveloped parcels. The tributary is not characterized on the NWI map. The mapped soil type is Houston Black clay, 2 to 4 percent slope, eroded. However, this soil has been altered due to the construction of the existing DNT facility. Because the tributary flows through a culvert within the DNT ROW, there is no vegetation associated with the water feature. Dominant vegetation within the DNT ROW at this location is Bermuda grass (*Cynodon dactylon*).

Water 2

Water 2 is an intermittent tributary to White Rock Creek. The stream flows from northwest to southeast. The tributary is contained within a culvert across the DNT ROW. It exits from the culvert approximately 70 feet east of the ROW boundary on the east side of DNT. The OHWM width is approximately 19 feet at the culvert outfall and the depth was not determined. Approximately 344 linear feet, or 0.15 acre, of the tributary is within the proposed project area. See **Exhibit 4**, **Sheet 2** and **Appendix A, Photo 2**.

The tributary receives runoff from existing roadways and businesses on the west side of DNT. It also receives storm water runoff from DNT. The NWI map does not characterize this portion of the stream within the DNT ROW. East of DNT, the NWI characterizes the stream as palustrine, forested, broad-leaf deciduous, and seasonally

flooded (PFO1C). The mapped soil type is Houston Black clay, 1 to 3 percent slopes. However, this soil has been altered within the DNT ROW due to the construction of the existing DNT facility. Because the tributary is contained within a culvert in the DNT ROW, there is no vegetation associated with the water feature. Dominant vegetation within the DNT ROW at this location is Bermuda grass.

Water 3

Water 3 is an intermittent tributary to Indian Creek. The stream flows westerly from the DNT ROW. It appears the tributary is contained within a culvert across the DNT ROW. Evidence of the stream was not observed during the site investigation, but the feature is mapped on the USGS topographic map (**Exhibit 2**). The tributary exits a culvert approximately 900 feet west of the DNT ROW on the west side of DNT. The OHWM width is approximately 5 feet and depth was not determined. Approximately 297 linear feet, or 0.03 acre, of the tributary is within the proposed project area. See **Exhibit 4**, **Sheet 3**.

The tributary receives runoff from existing roadways and businesses on the east and west sides of DNT. It also receives storm water runoff from DNT. The NWI map does not characterize the portion of the stream within the DNT ROW. West of DNT, the NWI characterizes the stream as palustrine, forested, broad-leaf deciduous, and seasonally flooded (PFO1C). The mapped soil type is Houston Black clay, 0 to 1 percent slopes. However, this soil has been altered within the DNT ROW due to the construction of the existing DNT facility. Because the tributary is contained within a culvert in the DNT ROW, there is no vegetation associated with the water feature. Dominant vegetation within the DNT ROW at this location is Bermuda grass. No photographs of this feature were obtained as it is contained within a culvert until 900 feet west of the proposed project area.

Water 4

Water 4 is an unnamed perennial tributary to Lewisville Lake. The tributary flows in a westerly direction from the DNT/SRT interchange to Lewisville Lake. The tributary is contained within a culvert across the DNT ROW and exits the culvert at the edge of the ROW in the northwest corner of the DNT/SRT interchange. The OHWM width is approximately 20 feet and depth is approximately 8 to 12 inches. Approximately 1,300 linear feet, or 0.60 acre, of the tributary is within the proposed project area. See **Exhibit 4**, **Sheet 6** and **Appendix A, Photo 3**.

The tributary receives runoff from existing roadways and businesses adjacent to the interchange. It also receives storm water runoff from DNT and SRT. The NWI characterizes the tributary as riverine, lower perennial, open water/unknown bottom, permanently flooded (R2OWH). The mapped soil types are Eddy gravelly clay loam, 3 to 8 percent slopes, eroded and Houston Black clay, 2 to 4 percent slope, eroded. However, this soil has been altered within the DNT ROW due to the construction of the existing DNT facility. Because the tributary is contained within a culvert in the DNT ROW, there is no vegetation associated with the water feature. Dominant vegetation within the DNT ROW at this location is Bermuda grass.

The four water features are summarized in **Table 2**.

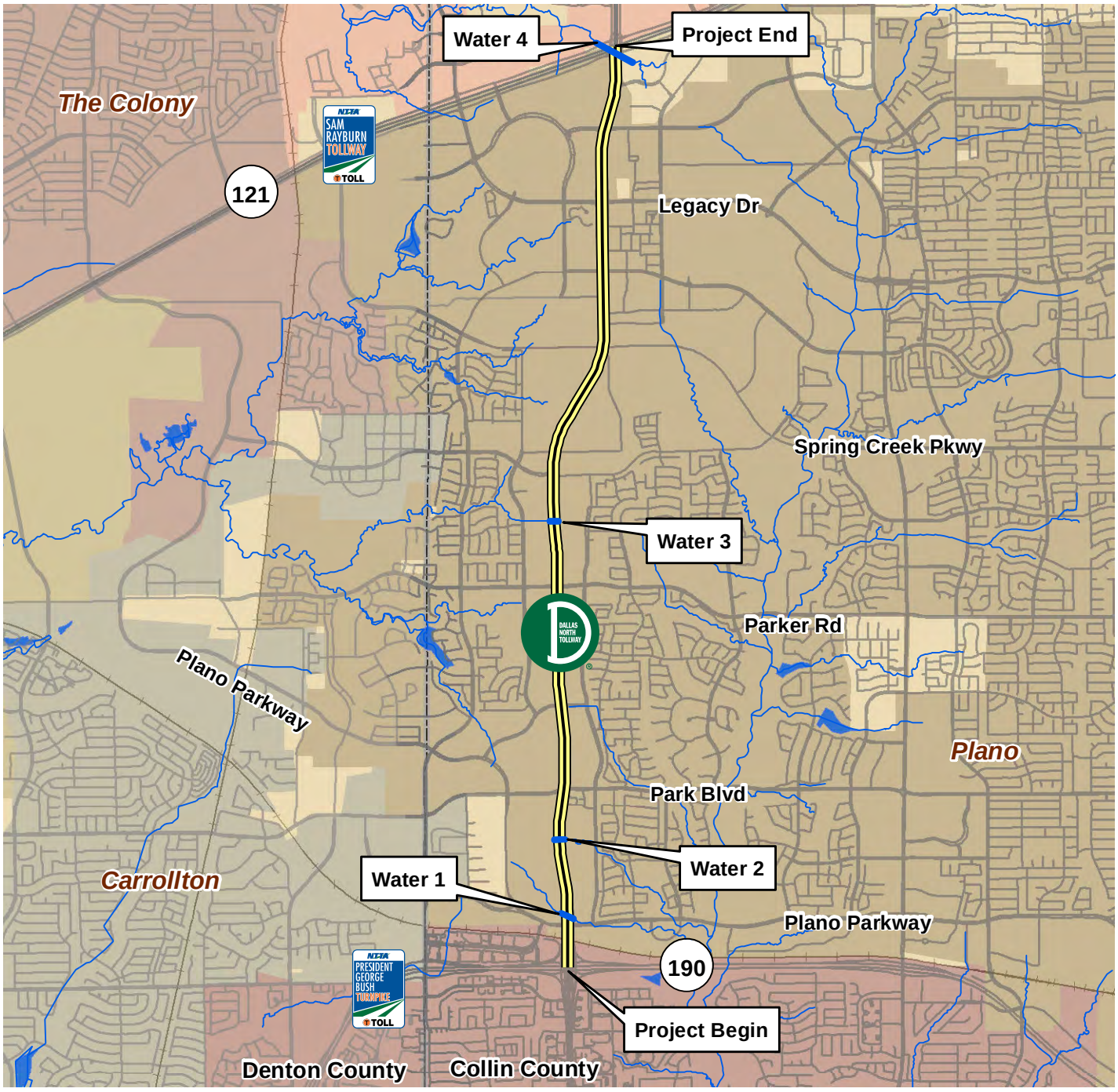
Table 2: Potential Waters of the U.S., Including Wetlands, within the Proposed Project Area

Feature	Linear Feet	Acreage
Water 1	425	0.02
Water 2	344	0.15
Water 3	297	0.03
Water 4	1,300	0.60
Total Waters	2,366	0.80

CONCLUSION

Based on the results of the on-site evaluations along the approximately 5.5-mile project corridor, it was determined that potential waters of the U.S. are present within the proposed project limits. No wetland features were identified. Approximately 2,366 linear feet, or 0.80 acre of potentially jurisdictional waters were identified. Each of these water features has been previously impacted by the construction of DNT, PGBT, and SRT. However, the analysis indicates that these features are potentially subject to USACE jurisdiction under Section 404 of the CWA.

Exhibits



N

NTTA
NORTH TEXAS TOLLWAY AUTHORITY

0 0.25 0.5 0.75 1 Miles

LEGEND

- Proposed Project Limits
- Road
- Lake/Pond
- Stream
- County Boundary

Source: NTCOG GIS Data (2003-2006) - counties, cities, streets, streams, and lakes.

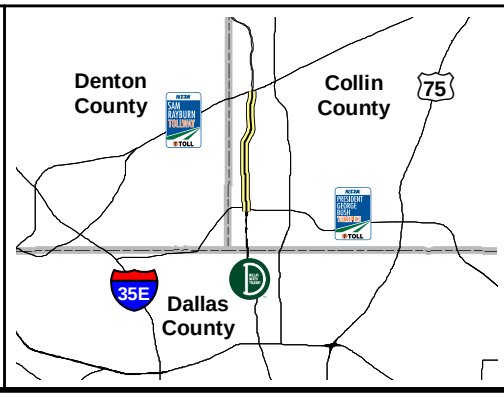
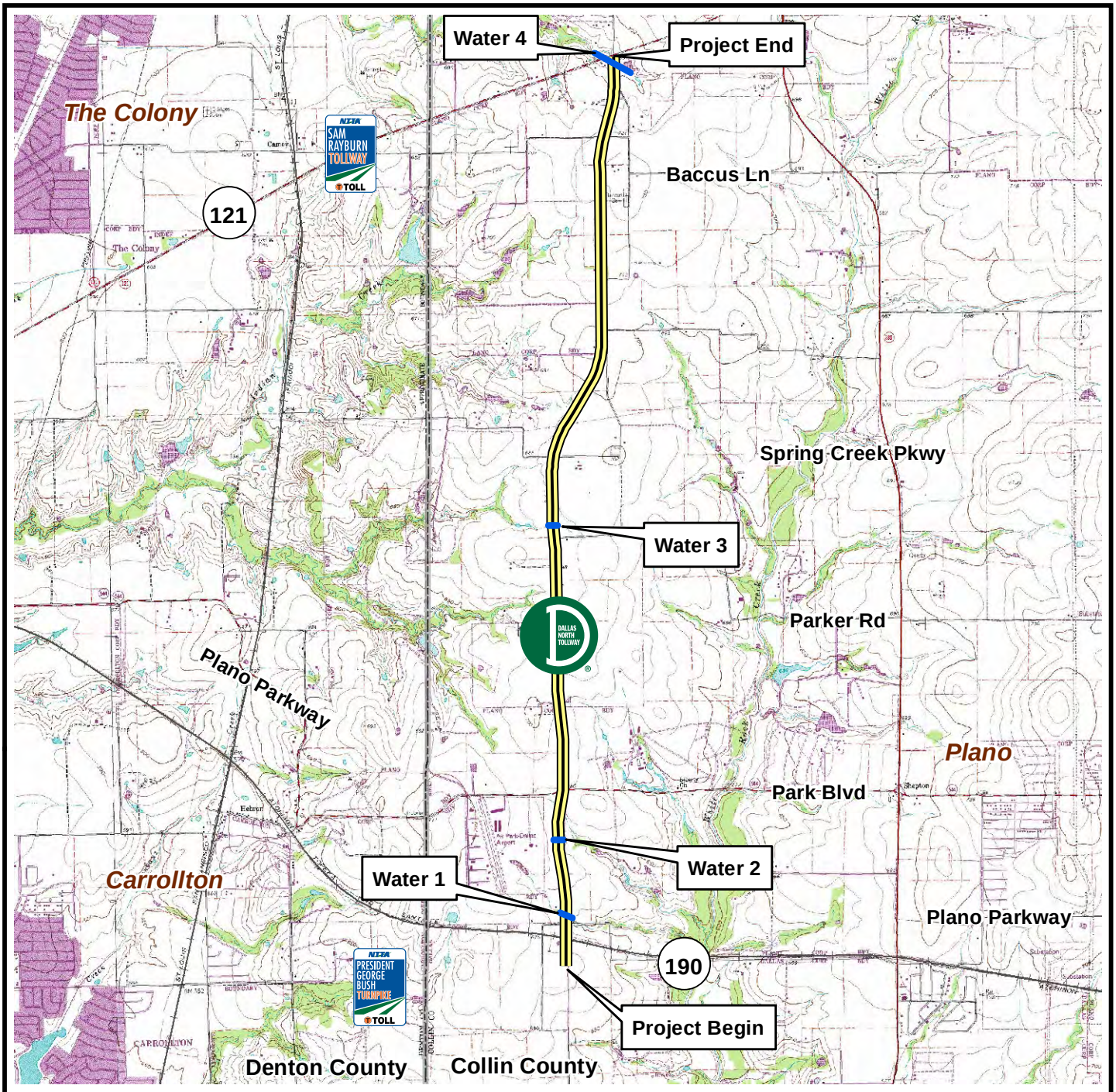


EXHIBIT 1
PROJECT LOCATION MAP

DNT
FROM PGBT TO SRT

Preliminary Jurisdictional Determination Report

Collin County, Texas



N

NTTA
NORTH TEXAS TOLLWAY AUTHORITY

0 0.25 0.5 0.75 1 Miles

LEGEND

- Proposed Project Limits
- Water Feature
- County Boundary

Source: USGS Hebron, TX 7.5 Minute Quadrangle Map (USDA-NRCS, 2003)

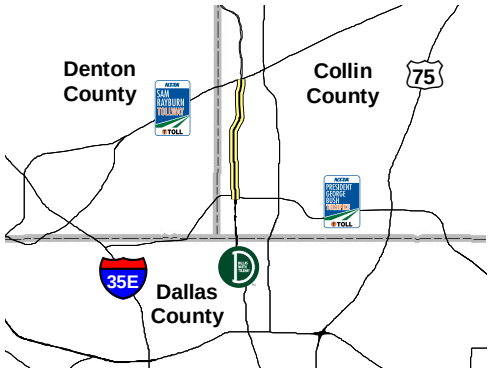
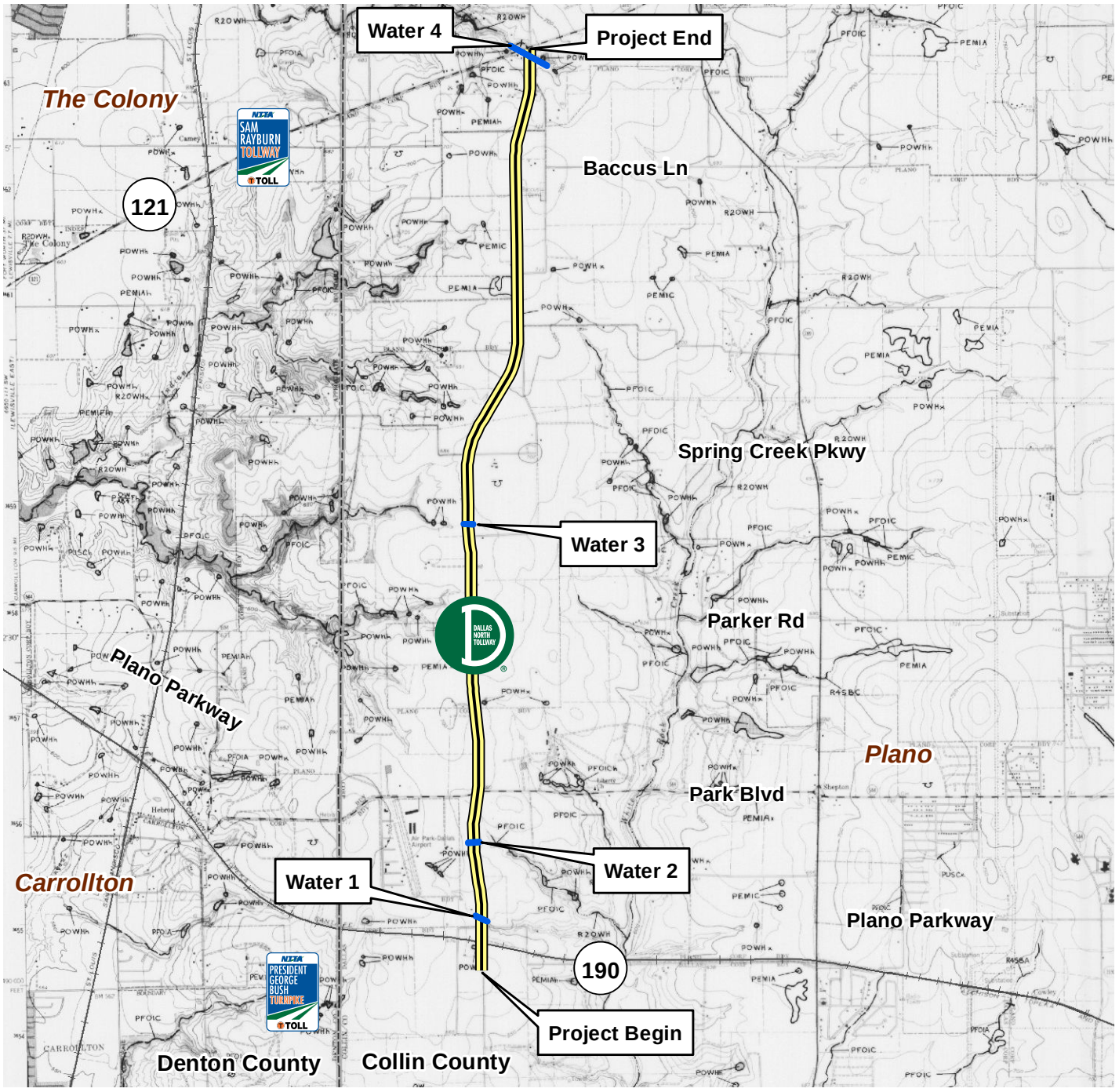


EXHIBIT 2
USGS TOPOGRAPHIC MAP

DNT
FROM PGBT TO SRT

Preliminary Jurisdictional Determination Report

Collin County, Texas



N

NTTA
NORTH TEXAS TOLLWAY AUTHORITY

0 0.25 0.5 0.75 1 Miles

LEGEND

- Proposed Project Limits
- Water Feature
- County Boundary

Source: USGS Hebron, Quadrangle Map (UFWS-NWI, 1992)

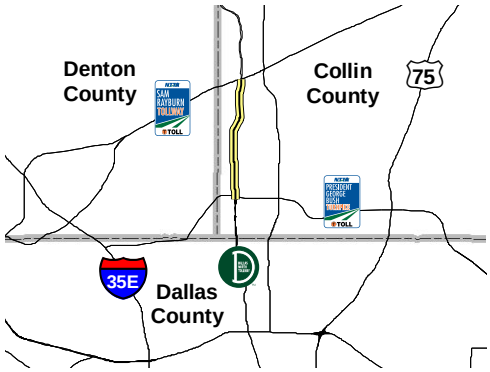


EXHIBIT 3
NWI MAP

DNT
FROM PGBT TO SRT

Preliminary Jurisdictional Determination Report

Collin County, Texas

Water 1
Intermittent Tributary
to White Rock Creek

Project Begin

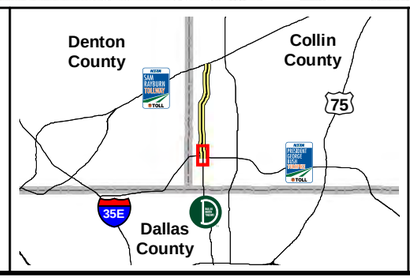
Plano Parkway

Source: Aerial Orthos (NTTA, 2011) and FEMA Q3 data (NCTCOG, 2011).

Legend

- Existing ROW
- Proposed ROW
- Existing Easement
- Proposed Easement
- Potential Jurisdictional Water
- 100-Year Floodplain

NTTA
NORTH TEXAS TOLLWAY AUTHORITY



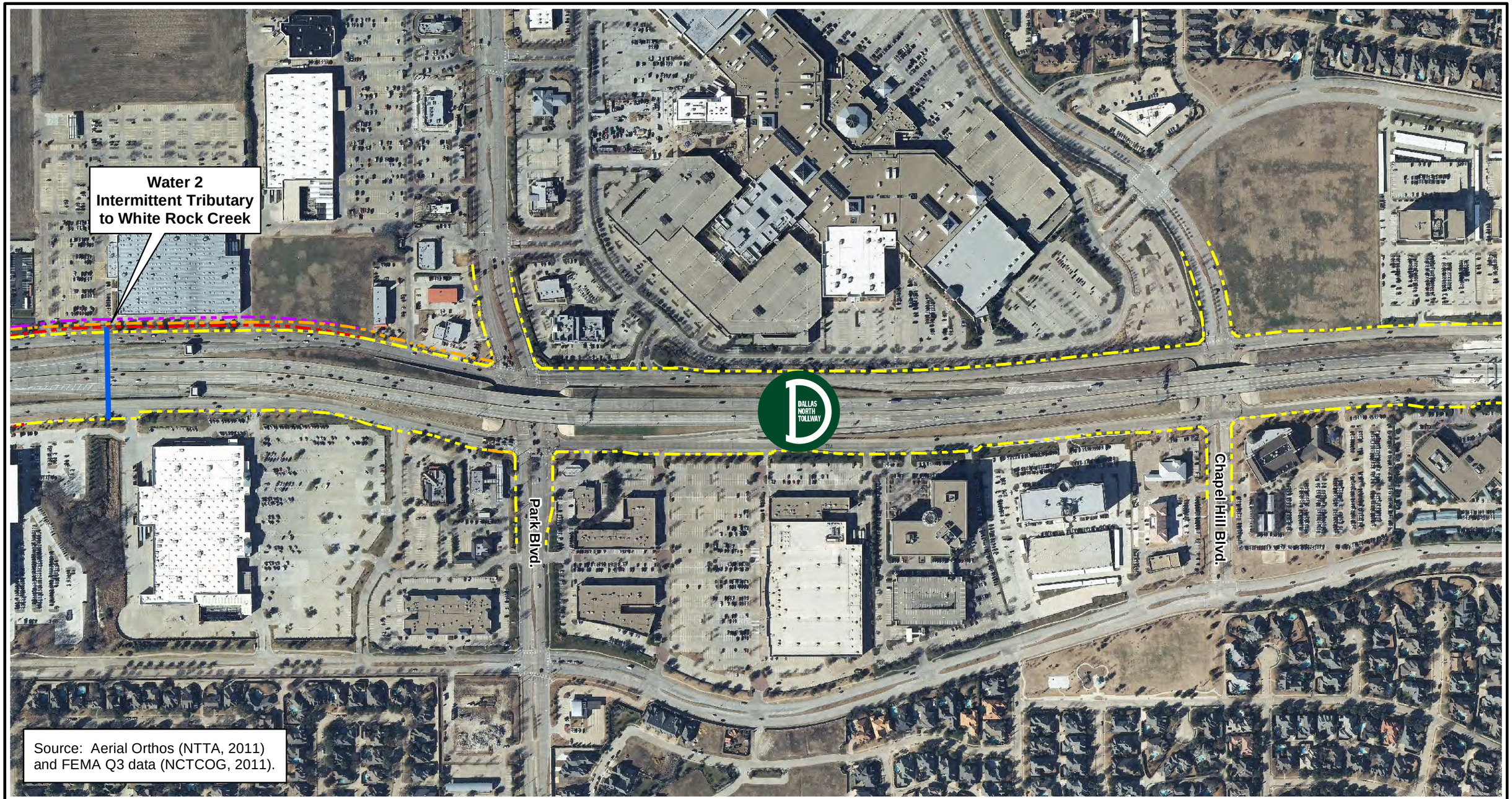
N

0 1,000 2,000 Feet

EXHIBIT 4
CORRIDOR MAP
SHEET 1 OF 6

DNT FROM PGBT TO SRT

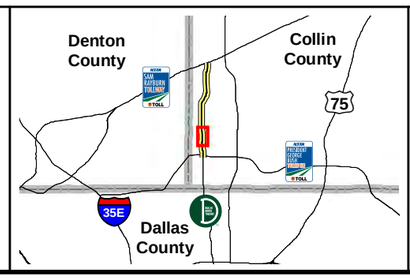
Preliminary Jurisdictional Determination Report
Collin County, Texas



Legend

- Existing ROW
- Proposed ROW
- Existing Easement
- Proposed Easement
- Potential Jurisdictional Water
- 100-Year Floodplain

NTTA
NORTH TEXAS TOLLWAY AUTHORITY



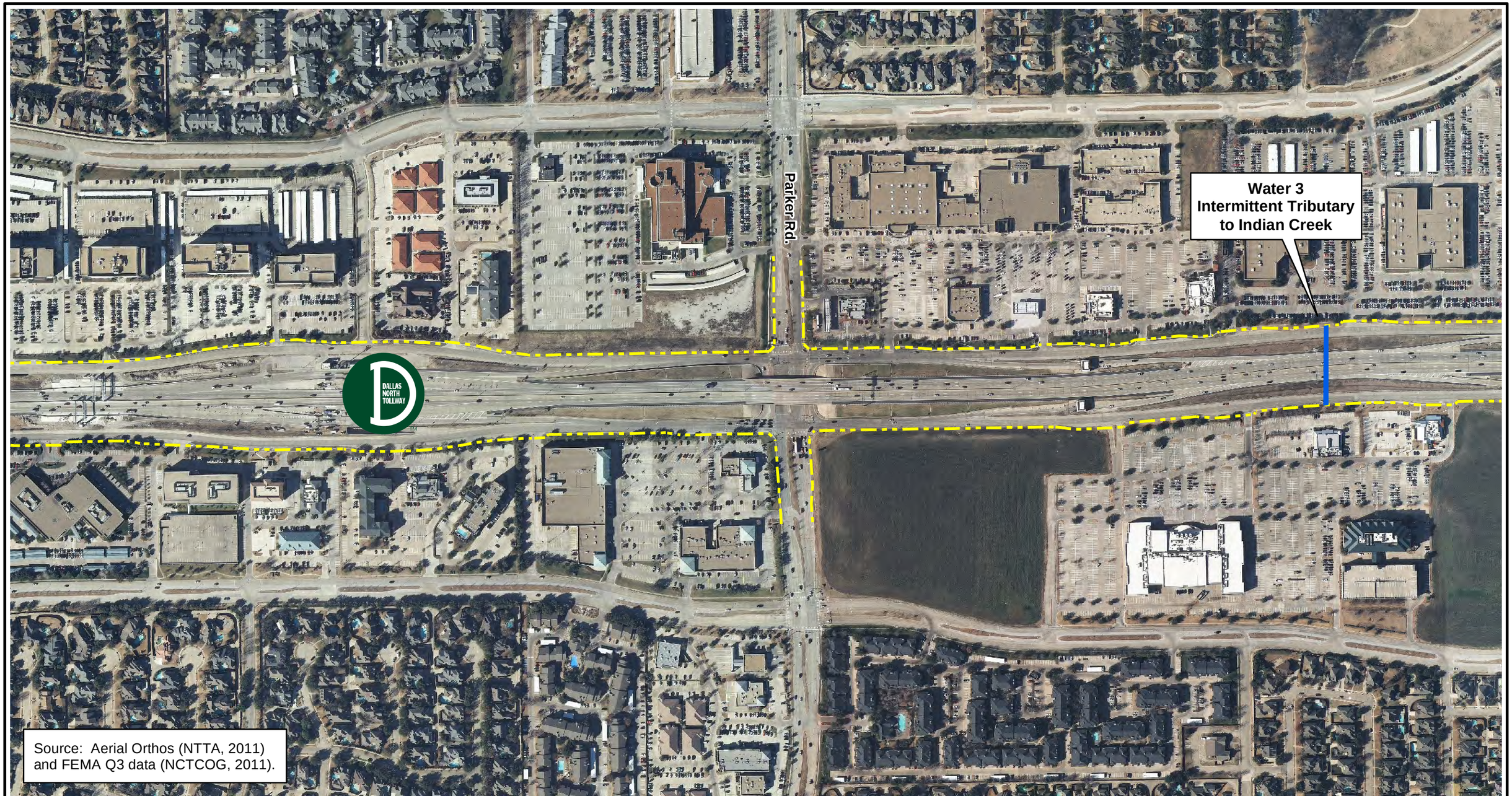
N

0 1,000 2,000 Feet

EXHIBIT 4
CORRIDOR MAP
SHEET 2 OF 6

DNT FROM PGBT TO SRT

Preliminary Jurisdictional Determination Report
Collin County, Texas



Legend

- Existing ROW
- Proposed ROW
- Existing Easement
- Proposed Easement
- Potential Jurisdictional Water
- 100-Year Floodplain

NTTA
NORTH TEXAS TOLLWAY AUTHORITY

N

0 1,000 2,000 Feet

EXHIBIT 4
CORRIDOR MAP
SHEET 3 OF 6

DNT FROM PGBT TO SRT

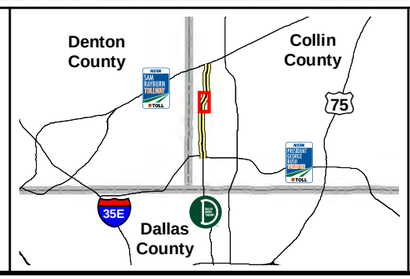
Preliminary Jurisdictional Determination Report
Collin County, Texas

Source: Aerial Orthos (NTTA, 2011) and FEMA Q3 data (NCTCOG, 2011).

Legend

- Existing ROW
- Proposed ROW
- Existing Easement
- Proposed Easement
- Potential Jurisdictional Water
- 100-Year Floodplain

NTTA
NORTH TEXAS TOLLWAY AUTHORITY



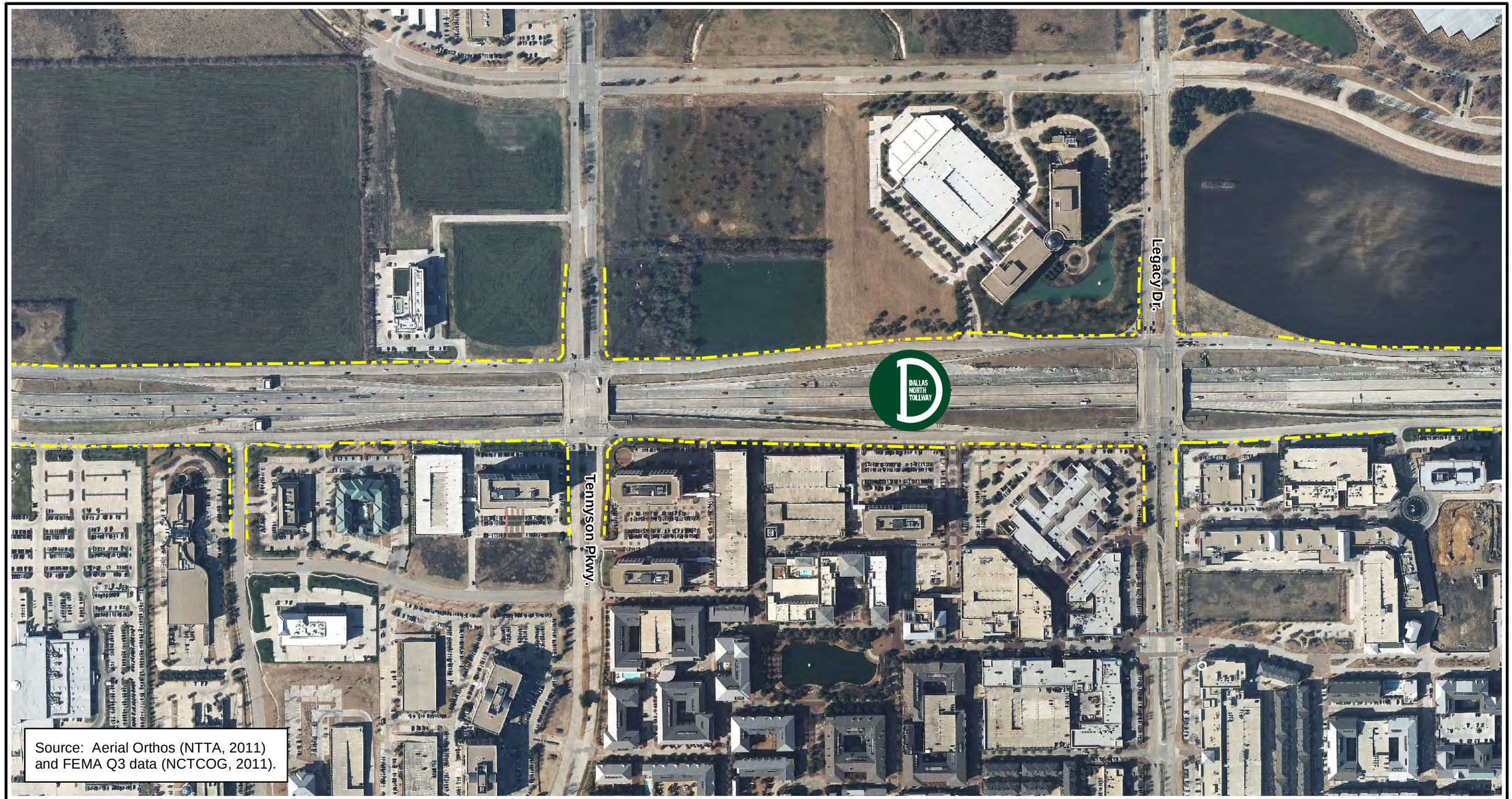
N

0 1,000 2,000 Feet

EXHIBIT 4
CORRIDOR MAP
SHEET 4 OF 6

DNT FROM PGBT TO SRT

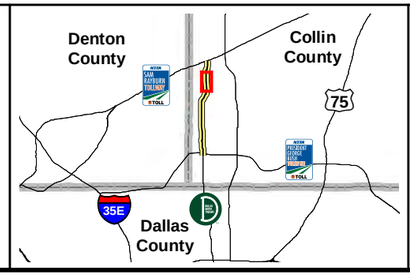
Preliminary Jurisdictional Determination Report
Collin County, Texas



Legend

- Existing ROW
- Proposed ROW
- Existing Easement
- Proposed Easement
- Potential Jurisdictional Water
- 100-Year Floodplain

NTTA
NORTH TEXAS TOLLWAY AUTHORITY



N

0 1,000 2,000 Feet

EXHIBIT 4
CORRIDOR MAP
SHEET 5 OF 6

DNT FROM PGBT TO SRT

Preliminary Jurisdictional Determination Report
Collin County, Texas

Water 4
Perennial Tributary
to Lewisville Lake

Tributary to Lewisville Lake

Project End

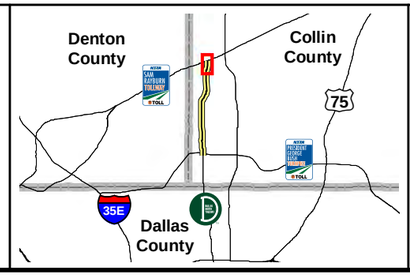
Headquarters Dr.

Source: Aerial Orthos (NTTA, 2011) and FEMA Q3 data (NCTCOG, 2011).

Legend

- Existing ROW
- Proposed ROW
- Existing Easement
- Proposed Easement
- Potential Jurisdictional Water
- 100-Year Floodplain

NTTA
NORTH TEXAS TOLLWAY AUTHORITY



N

0 1,000 2,000 Feet

EXHIBIT 4
CORRIDOR MAP
SHEET 6 OF 6

DNT FROM PGBT TO SRT

Preliminary Jurisdictional Determination Report
Collin County, Texas

Appendix

WATER FEATURE PHOTOGRAPHS

Photo 1. Water 1 – Looking east from west side of DNT culvert at edge of ROW.

Photo 2. Water 2 – Looking east from east side of DNT at downstream channel outside proposed project area.

Photo 3. Water 4 – Looking southeast from north of SRT at stream as it exits culvert at edge of ROW.

Appendix A